

# SEQUENCE LISTING

<110> COMPUGEN LTD

<120> VARIANTS OF ALTERNATIVE SPLICING

<130> 1290352 - COMPUGEN

<140>

<141>

<150> IL 132558

<151> 1999-10-25

<160> 52

<170> PatentIn Ver. 2.1

<210> 1

<211> 1530

<212> DNA

<213> Homo sapiens

<400> 1

```

caggcccttga ggttttggca gctctggagg atgagagaga acatggccag gggcccttgc 60
aacgcgcoga gatgggtgtc cctgatgttg ctogtcgcca taggcaccgc cgtgacagcg 120
gocgtcaacc ctggcgtcgt ggtcaggatc tcccagaagg gcctggacta cggcagccag 180
caggggaagg cgcctctgca gaaggagctg aagaggatca agattcctga ctactcagac 240
agctttaaga tcaagcatct tgggaagggg cattatagct totacagcat ggacatccgt 300
gaattccagc ttcccagttc ccagataagc atggtgcccc atgtgggccc taagttctcc 360
atcagcaacg ccaatatcaa gatcagcggg aaatqgaagg cacaaaagag attcttataa 420
atgagcggca attttgacct gagcatagaa ggcattgtcc ttteggctga tctgaagctg 480
ggcagtaacc ccacgtcagg caagcccacc atcacctgct ccagctgcag cagccacatc 540
aacagtgttc acgtgcacat ctcaaagagc aaagtcgggt ggctgatcca actcttccac 600
aaaaaaattg agtctgcgt tccaaacaag atgaacagcc aggtctgcga gaaagtgaac 660
aattctgtat cctccaagct gcaaccttat ttccagaact tgccagtaat gaccaaata 720
gattctgttg ctggaatcaa ctatggtctg gtggcacctc cagcaaccac ggctgagacc 780
ctggatgtac agatgaaggg ggaattttac agtgagaacc accacaatcc acctcccttt 840
gtccaccag tgatggagt tcccgtctgc catgaccgca tgggtatacct gggcctctca 900
gactacttct tcaacacagc cgggcttgta taccagagg ctggggtctt gaagatgacc 960
cttagagatg acatgattcc aaaggagtcc aaatttcgac tgacaacca gttcttttga 1020
accttcctac ctgaggtggc caagaagttt cccaacatga agatacagat ccattgtctc 1080
gcctccaccc cgcacacact gtctgtgcag cccaccggcc ttaccttcta cctgcccgtg 1140
gatgtccagg cctttgccgt cctcccaaac tctccctgg cttccctctt cctgattggc 1200
atggttaagc gttcctgggt tggacagatg aggagcccca gacagtccca acagcactgt 1260
ctttggagtc aggagaccat gtgaatcctg tctggattca aacctggact gtgtcactcc 1320
ggagontgag gcttgagtc ctgtaactca tggtgccgac tctggagggt attcattcac 1380
ccagccattc actagtgcgt ttgtttactt attcattcaa ttattcattc agtcaatttc 1440
tcattcattc anttattcat tccatgttgg cttgaaatat gtgtactgtt ccaattnatc 1500
catttatatc tttagtcat caattatgca
1530

```

<210> 2

<211> 2251

<212> DNA

<213> Homo sapiens

<400> 2

```

ttttttcagg ggtatgaggc tttattcagg aagagctcaa gatgggaggg gagcccttgg 60
ggtccacttc ttgtggcctc ttgataccaa ggctcatggg acgctaaaac ctaatgactg 120
caggcatctg agcttccttg gactcatctg tggggggcac aggggcagcc tcagagtcac 180

```

```

ccgtgggggg caccaggggg gccccggagt cccccgtggg cggcacgggg gcggtctcgg 240
agtcaccccg agcgggggat gggcagccct agtgtcacc aaggtgggca cgggcctcag 300
agtcaccccg gggcgggacg gggggggccc cggagtcacc cgtgggcggc acgggggggg 360
cdcccgagtc acccgtgggc ggcacggggg gggccccgga gtcacccgtg ggcggcacgg 420
ggcggtcttc ggagtcaccc gtggggggga cgggagtggc ctcggagtc cctgtggggg 480
gcacaggggt ggctccttgg tcgggtcactg tgggcagcgc cagataggtg aggggtccagt 540
agcgcaqaa gttgggttctc aggtccgct tcatggagct gctgcccatc ttcttgggtg 600
tctccaggta ggcgtgttt tccgtagtgt agggttccca gtgtgtgggc acagccgagt 660
cgcccatgtt ggggtccctt gttttggcaa agttgggtcca gtaggcgatc atggccttag 720
agactgtcct gtcttggggc cggtagcccg tgggggtggc gaagggtctt ccgaaaacgt 780
actgaatgtc atctgcattg tcggccccca cccatttggg gtagacgggc atccgagagg 840
gatgggaaaa caggttagggc taggtcttgg cactcttggc attggtctct tgctgggcta 900
gggcaatctc ggtgggcacc aggaagagga cctcggcttc aaagtccacc acagtcttct 960
tcttattctc ctgggatggg tccctgggcc aggactcggg gtagacatca aaggtcgtct 1020
tggcgctctc gagcccttgg gtgattgtga actcactgac cagctttagt aagtcctcct 1080
ccgtgacttt ctgttggccc ttgttgatgg caggcatgtc gatgtggcg aagatgtggc 1140
cgtccatgtt gttgggtgct gctatatagt cgatgtcggc ggcttggcg tacaggttga 1200
tcgggtcagc ggggatgaag tctccatcaa tgacagggac gaagcccaca tagtgacgca 1260
tgggtgactc caggcctgcc agcggcacct tataggccag cgtcagggtc cggggatcag 1320
taaccttcag acctggggc atcctggcgg catcacccac agggcaacce acctctcag 1380
ccaccttttt gggccggaag agtgggtttt totggatgac ccagggaactc agggccacgc 1440
cgctctggct gatggctcgc cggatgaggc ccttgttcta gggggagagg gtctgcagag 1500
agacgtggc acctccagca gactcccgga agagcgtgat gttgttgggg tcccccccg 1560
agggcggatc attcctcttc acccaagcaa tggccatgtg ctgatccgga agaccatagt 1620
tacctggcag attggcgttc ccgctgttgg cgatctctc gcgctcatac aggtagtgt 1680
aggtgaccac gatgacgttt cggcccatgg ccggaccca tgaggaaggc gcctccatag atccagatca 1800
tgaggaagtt ggcgccatgg acttgcctcc tgccctgggg ggcctgcagg catctcttct 1920
taaggtctct ggcccttcagg gtcccttggc agccaggatg tggctgagga tttccaggg 1980
ccttgggtgg agctgcgaag gggatgcct tgaagatgtc cacagagtc cccaggagg 2040
cgagctctct attgacgct tccacgaacc cacttctgt gtacacggcg ccagcttctg 2100
cggcactcgc cactgcccag caggcaggtg gggccaaac aaccagttgc aggcgcccc 2160
tggtgagcat cagcctcttg atgaataaac tctttgcatt atottgagac tgctgttct 2220
tccatcttga cacttaactg atacagaagg t 2251

```

&lt;210&gt; 3

&lt;211&gt; 2078

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 3

```

ctgctgctcc tgggttctct gctggtgagc ttggagtcaa cactttcgat tccaccttgg 60
gaagccccca aggagcataa gtacaaagct gaagagcaca cagtcgttct cactgtcacc 120
ggggagccct gncacttccc ctccagtagc caccggcagc tgtaccacaa atgtaccacc 180
aagggcgagg caggccctca gccctggtgt gctaccaccc ccaactttga tcaggaccag 240
cgatggggat actgtttgga gcccagaaga gtgaaagacc actgcagcaa acacagcccc 300
tgccagaaaag gagggacctg tgtgaacatg ccaagcggcc cccactgtct ctgtccacaa 360
cacctcactg gaaaccactg ccagaaagag aagtgtcttt agcctcagct tctccggttt 420
ttccacaaga atgagatag gtatagaact gagcaagcag ctgtggccag atgcccagtgc 480
aaggggtccg atgcccactg ccagcggctg gccagccagg cctgcccagc caaccctgtc 540
ctccatgggg gtccgtgccc agaggtggag ggccacggcc tgtgccactg cccgggtggc 600
tacaccggac ccttctgcga cgtggacacc aaggcaagct gctatgatgg ccgcgggctc 660
agctaccgcy guctggccag gaccacgtct tcgggtgccc cctgtcagcc gtgggcctcg 720
gagggccact accggaacgt gactgccgag caagcggcga actggggact gggcgggcac 780
gccttctgcc ggaaccggga caacgcacat cgcctgtgtt gcttcgtgtt gaaccgcgac 840
cggtgagct gggagtactg cgacctggca cagtgcacga ccccaacca ggcggcgcc 900
cggacccccg tgtcccttag gcttcatgtc cactcatgc ccgcgcagcc ggcaccgccc 960
aagcctcagc ccccgacccc gacccgcct cagtccaga ccccgggagc cttgcggcg 1020
aagcgggagc agcggccttc cctgacccag aacggccccc tgagctgcgg gcagcggctc 1080

```

cgcaagagtc	tgtcttcgat	gacccgcgtc	gttgccgggc	tgggtggcgt	acggggggcg	1140
cacccctaca	tggccggcgt	gtactggggc	cacagtttct	ggccgggcag	cctcatcgcc	1200
ccctgctggg	tgttgacggc	cgctcactgc	ctgcaggacc	ggcccgacc	cgaggatctg	1260
acgggtggtg	tgggacagga	acggcgtaac	cacagctgtg	agccgtgcca	gacgttggcc	1320
gtgcgctcct	acggcttgca	cgaggccttc	tggcccgtea	gctaccagca	cgacctggct	1380
ctgtttgcgc	tlcaggagga	tggggacggc	agctgcgggc	tcctgtcgcc	ttacgttcag	1440
ccgggtgtgc	tggcaagcgg	cgcccgcgga	ccctccgaga	ccacgctctg	ccagggtggc	1500
ggctggggcc	accagttcga	ggggggcggg	gaatatgcca	gcttcctgca	ggaggcgcag	1560
gtaccgttcc	tctccctgga	gcgctgctca	gcccgggacg	tgcacggatc	ctccatcctc	1620
cccgcatgc	tctgcgcagg	gttccctcag	ggcggaacgg	atgcgtgcag	gtgagctctt	1680
agccggttgg	cgcccttccc	cgaggcgcgc	agcawaatct	caggctccaca	gcgctgactg	1740
cgtgtttccg	acccagggtg	attccggagg	cccgcctggt	tgtgaggacc	aagctgcaga	1800
gcgcgggctc	accccgcaag	gcctcatcag	ctggggatcg	ggctgtggtg	accgcaacaa	1860
gcccggcgct	tacacccgat	tggcctacta	cctggcctgg	atccgggagc	acaccgtttc	1920
ctgattgctc	agggactcat	ctltccctcc	ttggtgattc	cgcagtgaga	gagtggtgct	1980
ggcatggaag	gcagatttgt	gtcccatccc	cccagtgccg	ccagctccgc	gccaggatgg	2040
cgcaggaaact	caataaaatg	ctttgaaaat	gctgagaa			2078

<210> 4  
 <211> 720  
 <212> DNA  
 <213> Homo sapiens

<400> 4						
tgcaccgccc	cttggcttct	gcactgatgg	tgggtggatg	agtaatgcat	ccaggaagcc	60
tggaggcctg	tggtttccgc	acccgctgcc	acccccgccc	ctagcgtgga	catttatcct	120
ctagcgtcca	ggccctgcgc	gcctgcgcgc	agatccagcg	cccagagaga	caccagagaa	180
cccaccatgg	ccccctttga	gcccctggct	tctggcatcc	tgttgttgct	gtggctgata	240
gccccagca	gggctgcac	ctgtgtccca	ccccaccac	agacggcctt	ctgcaattcc	300
gacctcgtca	tcaggggccaa	gttcgtgggg	acaccagaag	tcaaccagac	caccttatcc	360
cagcgttatg	agatcaagat	gaccaagatg	tataaagggt	tccaagcctt	aggggatgcc	420
gctgacatcc	ggttcgtcta	cacccccgcc	atggagagtg	tctgcggata	cttccacagg	480
tcccacaacc	gcagcgagga	gtttctcatt	gctggaaaac	tgcaggatgg	actcttgcac	540
atcactacct	gcagttttgt	ggctccctgg	aacagcctga	gcttagctca	gcgcgggggc	600
ttcaccaga	cctacactgt	tggcgtgag	gaatgcacag	tgtttccctg	ttcccactcc	660
cattttctct	ccgggcaatg	aaataaagag	ttaccaccca	gcagaaaaaa	caaacaagtc	720

<210> 5  
 <211> 556  
 <212> DNA  
 <213> Homo sapiens

<400> 5						
tgcaccgccc	cttggcttct	gcactgatgg	tgggtggatg	agtaatgcat	ccaggaagcc	60
tggaggcctg	tggtttccgc	acccgctgcc	acccccgccc	ctagcgtgga	catttatcct	120
ctagcgtcca	ggccctgcgc	gcctgcgcgc	agatccagcg	cccagagaga	caccagagaa	180
cccaccatgg	ccccctttga	gcccctggct	tctggcatcc	tgttgttgct	gtggctgata	240
gccccagca	gggctgcac	ctgtgtccca	ccccaccac	agacggcctt	ctgcaattcc	300
gacctcgtca	tcaggggccaa	gttcgtgggg	acaccagaag	tcaaccagac	caccttatcc	360
cagcgttatg	agatcaagat	gaccaagatg	tataaagggt	tccaagcctt	aggggatgcc	420
gctgacatcc	ggttcgtcta	cacccccgcc	atggagagtg	tctgcggata	cttccacagg	480
tcccacaacc	gcagcgagga	gtttctcatt	gctggaaaac	tgcaggtagt	gatgtgcaag	540
agtccatccg	tgttac					556

<210> 6  
 <211> 934  
 <212> DNA  
 <213> Homo sapiens

&lt;400&gt; 6

```

tcgaccgccc cttggcttct gcaactgatgg tgggtggatg agtaatgcat ccaggaagcc 60
tggaggcctg tggtttccgc acccgctgcc acccccgccc ctagecgtgga cttttatcct 120
ctagcgctca ggccttgcgc gcacgcgcgc agatccagcg ccagagaga caccagagaa 180
cccaccatgg ccccttttga gcccttggct tctggcatcc tgttgttgct gtggctgata 240
gccccagca gggcctgcac ctgtgtccca ccccaccac agacggcctt ctgcaattcc 300
gacctgtca tcagggcaca gttcgtgggg acaccagaag tcaaccagac cactttatac 360
cagcgttatg agatcaagat gaccaagatg tataaagggt tccaagcctt aggggatgcc 420
gctgacatcc ggttcgtcta ccccccgcc atggagagtg tctgcggata cttccacagg 480
tcccacaacc gcagcagga gttttctcatt tgcctggaaa attgcaggat gggatttttg 540
cacattcact aacctgcagt ttttgttggg ttccctggga acagcctgag cttagctcag 600
cgccggggcl tcaccaagac ctacactgtt ggcctgtagg aatgcacagt gtttccctgt 660
ttatccatcc cctgcacaact gcagagtggc cactttgctt tctggacgga ccagctcttc 720
caaggctctg aaaggcgtt ccagtcctgt actcattgct tctggacgga ccagctcttc 780
ctgtgcacct ggcagtcctt ggggtcccag atagcctgaa tctgcccgg agtggagct 840
gaagcctgca cagtgtccac cctgttccca cccccatctt tcttccggac aatgaaataa 900
agayttacca cccagcagaa aaacaaaca agtc

```

934

&lt;210&gt; 7

&lt;211&gt; 783

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 7

```

tcgaccgccc cttggcttct gcaactgatgg tgggtggatg agtaatgcat ccaggaagcc 60
tggaggcctg tggtttccgc acccgctgcc acccccgccc ctagecgtgga cttttatcct 120
ctagcgctca ggccttgcgc gcacgcgcgc agatccagcg ccagagaga caccagagaa 180
cccaccatgg ccccttttga gcccttggct tctggcatcc tgttgttgct gtggctgata 240
gccccagca gggcctgcac ctgtgtccca ccccaccac agacggcctt ctgcaattcc 300
gacctgtca tcagggcaca gttcgtgggg acaccagaag tcaaccagac cactttatac 360
cagcgttatg agatcaagat gaccaagatg tataaagggt tccaagcctt aggggatgcc 420
gctgacatcc ggttcgtcta ccccccgcc atggagagtg tctgcggata cttccacagg 480
tcccacaacc gcagcagga gttttctcatt tatccatccc ctgcaactcg cagagtggca 540
ctcattgctt gtggacggac cagctctccc aaggctctga aaaggccttc cagtcccgtc 600
accttgcctg cctgcctcgg gaggcagggc tgtgcacctg gcagtccttg cggctccaga 660
tagcctgaat cctgcccggg gtggaagctg aagcctgcac agtgtccac ctgttccac 720
tcccatcttt cttccggaca atgaaataaa gagttaccac ccagcagaaa aaacaaaca 780
gtc

```

783

&lt;210&gt; 8

&lt;211&gt; 895

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 8

```

tcgaccgccc cttggcttct gcaactgatgg tgggtggatg agtaatgcat ccaggaagcc 60
tggaggcctg tggtttccgc acccgctgcc acccccgccc ctagecgtgga cttttatcct 120
ctagcgctca ggccttgcgc gcacgcgcgc agatccagcg ccagagaga caccagagaa 180
cccaccatgg ccccttttga gcccttggct tctggcatcc tgttgttgct gtggctgata 240
gccccagca gggcctgcac ctgtgtccca ccccaccac agacggcctt ctgcaattcc 300
gacctgtca tcagggcaca gttcgtgggg acaccagaag tcaaccagac cactttatac 360
cagcgttatg agatcaagat gaccaagatg tataaagggt tccaagcctt aggggatgcc 420
gctgacatcc ggttcgtcta ccccccgcc atggagagtg tctgcggata cttccacagg 480
gctggaaaaa tgcaagatgg actcttgca atcactacct gcagttttgt ggtcccttg 540
aacagcctga gcttagctca ggcggggg ctcaccaaga cctacactgt tggctgtgag 600
gaatgcacag tgttccctg tttatccatc cctgcaaac tgcagagtgg cactcattgc 660
ttgtggacgg accagctctt ccaaggctct gaaaagggtt tccagtcctg tcaccttgcc 720
tgctgcttc gggagccagg gctgtgcacc tggcagtcct tgcggtccca gatagcctga 780

```

atcctgcccc gagtggaaagc tgaagcctgc acagtgtcca cccgtgtccc actcccatct 840  
 ttcttcggga caatgaaata aagagttacc acccagcaga aaaaacaaac aagtc 895

<210> 9

<211> 2565

<212> DNA

<213> Homo sapiens

<400> 9

```

ggcaccagca qccccggagc cggggccagg gtccacctgt ccccgagcg cgggctcgcg 60
ccctcctgcc gcagccaccg agccgccgtc tagcgccccg acctcgccac catgagagcc 120
ctgctgggcg gccgcttctt ctgcgtcctg gtgctgagcg actccaaagg cagcaatgaa 180
cttcattcaag ttccatcgaa ctgtgactgt ctaaattggag gaacatgtgt gtccaacaag 240
tacttttcca acattcactg gtgcaactgc ccaaagaaat tcggagggga gcaactgtgaa 300
atagataagt caaaaacctg ctatgagggg aatggctact ttaccgagg aaaggccagc 360
actgacacna tgggcccggc ctgcctgccc tggaactctg ccactgtcct tcagcaaacg 420
taccatgccc acagatctga tgcctttcag ctgggctggg ggaacataa ttactgcagg 480
gaggtggggg cacaaggacc aaaagccctc cctacagttc ccagaaacct tgttaccatc 540
cccttctccc agagggtggg ccclagcaca agagaagtgc agcctctggt tgagtcttcc 600
ctgagggggg gaggcaggga aggcctctct ggttggaatg acatccccta tctttctgtg 660
ttgccaggaa cccagacaaac cggaggcgac cctgggtgcta tgtgcaggtg ggcctaaagc 720
cgcttgtcca agagtgcctg gtgcctgact gcgcagatgg aaaaaagccc tctctctc 780
cagaagaatt aaattttcag tgtggccaaa agactctgag gccccgcttt aagattattg 840
ggggagaatt caccaccatc gagaaccagc cctgggttgc ggccatctac aggaggcacc 900
gggggggctc tgtcaacctc gtgtgtggag gcagcctcat cagcccttgc tgggtgatca 960
gcgccacaca ctgcttcaat gattacccaa agaaggagga ctacatcgtc tacctgggtc 1020
gctcaaggct taactccaac acgcaagggg agatgaagt ttgaggtgaa aacctcatcc 1080
tacacaagga ctacagcgct gacacgcttg ctaccacaa cgacattgcc ttgctgaaga 1140
tccgtttcca qgagggcagg tgtgcgcagc catcccgac tatacagacc atctgcctgc 1200
cctgatgta taacgatccc cagtttggca caagctgtga gatcactggc tttgaaaaag 1260
agaattctac cgaactatct tatccggagc agctgaaaaat gactgttgtg aagctgattt 1320
cccaccggga gtgtcagcag ccccaactact acggctctga agtcaccacc aaaatgctgt 1380
gtgctgctga cccacagtgg aaaacagatt cctgccaggg agactcaggg ggacccctcg 1440
tctgttccct ccaaggccgc atgactttga ctggaattgt gagctggggc cgtggatgtg 1500
ccctgaagga caagccaggc gtctacacga gagtctcaca ctctttacco tggatccgca 1560
gtcacaccaa ggaagagaat ggcctggccc tctgagggtc cccaggggag aaacgggcac 1620
cacccgcttt cttgctggtt gtcatttttg cagtagagtc atctccatca gctgtaagaa 1680
gagactggga agataggtc tgcanagatg gatttgccctg tgccaccacc agggggaacg 1740
acaatagctt taccctcagg cataggcctg ggtgctggct gccagacc ctctggccag 1800
gatggagggg tgtctctgac tcaacatggt actgaccagc aacttgtctt tttctggact 1860
gaagcctgca ggagttaaaa agggcagggc atctcctgtg catgggtgaa gggagagcca 1920
gctccccga cgggtggcat ttgtgaggcc catggttgag aaatgaataa tttcccaatt 1980
aggaagtgtg acagctgagg tctcttgagg gagcttagcc aatgtgggag cagcggtttg 2040
gggagcagag acactaacga cttcagggca gggctctgat attccatgaa tgtatcagga 2100
aatatatatg tgtgtgtatg ttgcacact tgtgtgtggg ctgtgagtgt aagtgtgagt 2160
aagagctggt gtctgattgt taagtctaaa tatttcctta aactgtgtgg actgtgatgc 2220
cacacagagt ggtctttctg gagaggttat aggtcactcc tggggcctct tgggtcccc 2280
acgtgacagt qccctgggaat gtattattct gcagcatgac ctgtgaccag cactgtotca 2340
gtttcacttt cacatagatg tccctttctt gccagttat cccctcttt tagcctagtt 2400
catncaatcc tcactgggtg ggggtaggac cactccttac actgaatatt tataattcac 2460
tatttttatt tatatttttg taattttaaa taaaagtgt caataaaatg tgatttttct 2520
gatgamaaaa aaaaaagggc ggccgctcta gagtatecct cgagg 2565

```

<210> 10

<211> 2438

<212> DNA

<213> Homo sapiens

<400> 10

```

ggggcacagc tgtgttttggc tgcaggggcca agagcgctgt caagaagacc cacacgcccc 60
cctccagcag ctgaatttctt gcaagctcagc agccgcccgc agagcaggac gaaccgcca 120
tcgcaaggca cctctgagaa cttcaggatg cagatgtctc cagccctcac ctgcctagtc 180
ctgggctctg ccttctgtctt tgggtgaaggg tctgctgtgc accatcccc atcctacgtg 240
gcccacctgg cctcagactt cgggggtgagg gtgtttcagc aggtggcgca ggccctccaag 300
gaccgcaacg tggttttctc accctatggg gtggcctcgg tgttggccat gctccagctg 360
acaacaggag gagaacccca gcagcagatt caagcagcta tgggattcaa gattgatgac 420
aagggcctgg ccccgccct cgggcctctg tacaaggagc tcatggggcc atggaacaag 480
gatgagatca gcaccacaga cggcatcttc gtccagcggg atctgaagct ggtccagggc 540
ttcatgcccc acttcttcag gctgttccgg agcaaggcca agcaagtggc cttttcagag 600
gtggagagag ccagatttcat catcaatgac tgggtgaaga cacacacaaa aggtatgac 660
agcaacttgc ttgggaaagg agcgtggac cagctgacac ggctgggtgt ggtgaatgcc 720
ctctacttca accgcnagt gaagactccc ttccccgact ccagcaccga ccgcccctc 780
ttccacaaat cagacggcag cactgtctct gtgcccata tggctcagac caacaagtct 840
aactatctg agttcaccac gcccgatggc cattactacg acatcctgga actgcccctac 900
cacggggaca ccttcagcat gttcatttgt gcagacctgg ttcccactga ggccctttgc 960
aggatggaac tacgggggctt acaggagctt ttgtgtgctt ggtagaaact atttctgttc 1020
cagtcacatt gccatcactc ttgtactgcc tggcccgccg gaggaggctg gtgacaggcc 1080
aaaggccagt ggaagaaaca ccttttctatc tcagagtcca ctgtggcact ggccacccc 1140
ccccagtaca ggggtgctgc aggtggcaga gtgaatgtcc cccatcatgt ggcccaactc 1200
tctggcctg gccatctccc tccccagaaa cagtggtgat gggttatttt ggagtgtagg 1260
tgaattgttt actcatttga gcaatttct gcttctcttt atttttatag gaatagagga 1320
agaaaggcca gatgctgtcc cagctcttca ccccccaatc tcttgggtgg gaggggtgta 1380
cctaaatatt tatcatatcc ttgcccttga gtgcttgtta gagagaaaga gaactactaa 1440
ggaaaataat attattttaa ctgctctcta gtgtttcttt gtggtctgtg tcaccgtatc 1500
tcagggaagtc cagccacttc actggcacac acccctccgg acatccagcg tgacggagcc 1560
cacactgcca ccttgtggcc gccgagacc ctgcgcccc cgcgcccccc cgcgcccccc 1620
tttttcccc tcatggaat tgaccatac atttcatccr ccttcagggg atcaaaagga 1680
cggagtgggg ggcacagagc tcagatgagg acagagtgtt ttccaatgtg ttcaatagat 1740
ttaggagcag aaatgcnagg ggtcgtatga cctaccagga cagaacttcc ccaattaca 1800
gggtgactca cagccgcatc ggtgactcac ttcaatgtgt catttccggc tgcgtgtgtg 1860
gagcagtggc cagtgagggg gggggtgggt gagagagaca ggcagctcgg attcaactac 1920
cttagataat atttctgaaa auctaccagc cttgagccca ggagttcaag accagcctgg 2040
gcacttttgg aggcacaggc gggaggtttg cttgttctaa aatataata ttttaaatat 2100
gcaacatacc aagacccccg tctctttaa aatataata tttttaaag accaatttat gggagaattg 2160
atatttclaa tatctttaa tatatatata tttttaaag accaatttat gggagaattg 2160
cacacagatg tgaatgaat gtaatcta atgaagccta tcagcccacc atgttctcca 2220
ctgaaaatcc cttcttcttt ggggttttct tttcttcttt ttttgatttt gcaactggacg 2280
gtgacgttca ccatgtacag gatccacagg ggtggtgtca aatgctattg aaattgtgtt 2340
gaattgtatg ctttttcaact tttgataaet aaacatgtaa aaatgtttca aaaaaataat 2400
aaaaataata aatacgaaga atatgtcagg acaaaaaa 2438

```

<210> 11

<211> 2522

<212> DNA

<213> Homo sapiens

<400> 11

```

ggggcacagc tgtgttttggc tgcaggggcca agagcgctgt caagaagacc cacacgcccc 60
cctccagcag ctgaatttctt gcaagctcagc agccgcccgc agagcaggac gaaccgcca 120
tcgcaaggca cctctgagaa cttcaggatg cagatgtctc cagccctcac ctgcctagtc 180
ctgggctctg ccttctgtctt tgggtgaaggg tctgctgtgc accatcccc atcctacgtg 240
gcccacctgg cctcagactt cgggggtgagg gtgtttcagc aggtggcgca ggccctccaag 300
gaccgcaacg tggttttctc accctatggg gtggcctcgg tgttggccat gctccagctg 360
acaacaggag gagaacccca gcagcagatt caagcagcta tgggattcaa gattgatgac 420
aagggcctgg ccccgccct cgggcctctg tacaaggagc tcatggggcc atggaacaag 480
gatgagatca gcaccacaga cggcatcttc gtccagcggg atctgaagct ggtccagggc 540
ttcatgcccc acttcttcag gctgttccgg agcaaggcca agcaagtggc cttttcagag 600
gtggagagag ccagatttcat catcaatgac tgggtgaaga cacacacaaa aggtatgac 660
agcaacttgc ttgggaaagg agcgtggac cagctgacac ggctgggtgt ggtgaatgcc 720

```

```

ctctacttca acggccagtg gaagactccc ttccccgact ccagcaccba ccgccgcctc 780
ttccacaaat cagacggcag cactgtctct gtgccatga tggctcagac caacaagttc 840
aactatactg agttcaccac gcccgatggc cactactacg acatcctgga actgccctac 900
cacggggaca cctcagcat gttcattgct gcccttatg aaaaagaggt gcctctctct 960
gccctcacca acattctgag tgcccagctc atcagccact ggaaaggcaa catgaccagg 1020
ctgccccgcc tcttggttct gcccaagttc tccctggaga ctgaagtcga cctcagggaag 1080
cccctagaga acctgggaat gaccgacatg ttccagacag ttccaggctga cttcaccaggt 1140
ctttcagacc aagagcctct ccacgtcgcg caggcgctgc agaaagtga gatcgagggtg 1200
aacgagagly gcacgglygc ctctcatcc acagctgtca tagtctcagc ccgcatggcc 1260
cccaggaga tcatcatggg cagacccttc ctctttgtgg tccctcccca gaaacagtgt 1320
gcatgqqtta ttttgagggt taggtgactt gtttactcat tgaagcagat ttctgcttcc 1380
ttttattttt ataggaatag aggaagaaag gtcagatgag tgcccagctc ttccaccccc 1440
aatctcttgg tggggagggg tqtacctaag taattattatt taaactcgct cctagtgttt 1500
gttagagaga aaggaacta ctaaggaaaa agtccagcca cttgactggc acacacccct 1560
ctttgtgggt tqtgtaccg tatctcagga agtccagcca cttgactggc acacacccct 1620
ccggacatcc agcgtgacgg agccacact gccaccttgt ggccgcctga gccctcgcg 1680
ccccccgggc cccccggccc cctctttttt cctttgatgg aaattgacca tacaatttca 1740
tctctcttca ggggatcaaa aggacggagt ggggggacag agactcagat gaggacagag 1800
tggtttccaa tgtgttcaat agatttagga gcagaaatgc aaggggctgc atgacctacc 1860
aggacagaac ttcccccatt tacagggtga ctccacggcg cattggtgac tcaattcaat 1920
gtgtcatttc cggctgctgt gtgtgagcag tggacacgtg aggggggggt ggggtgagaga 1980
gacaggcagc tcggattcaa ctaccttaga taatttttct gaaaacctac cagccagagg 2040
gtagggcaca aagatggatg taatgcactt tgggaggcca aggcgggagg attgcttgag 2100
cccaggagtt caagaccagc ctgggcaaca tacciaagacc cccgtctctt taaaaatata 2160
tatattttta atatacttaa atatatattt ctaatatctt taaatatata tatatatttt 2220
aaagaccaat ttalgggaga attgcacaca gatgtgaat gaatgtaato taatagaagc 2280
ctaactcagc caccatgttc tccactgaaa aatcctcttt ctttgggggt tttctttctt 2340
tcttttttga ttttgcactg gacggtgacg tcagccatgt acaggatcca cagggggtgtg 2400
gtcaaatgct attgaaattg tghtgaattg tatgcttttt cacttttgat aaataaacat 2460
gttaaaatgt ttcaaaaaaa taataaaata aataaatacg aagaatatgt caggacaaaa 2520
aa
2522

```

<210> 12  
 <211> 2272  
 <212> DNA  
 <213> Homo sapiens

```

<400> 12
ctcttccccg ctgagaggga cagccastgc gwctccwccc tccagctcga cggcagccgc 60
ccggccgaca gcccccagac gacagcccgg cgcgtccggg tccccacctc cgaccaccgc 120
cagcgtcca gggcccgcgc tcccgcctcg ccgcacccgc gccctccgct ccgcccgcag 180
tgccaaccat gaccgcggcc agtatgggccc ccgtccgggt cgccttcgtg gtcctcctcg 240
ccctctgcag ccggccggcc gtccggccaga actgcagcgg gccgtgccgg tgcccggacg 300
agccggcgcc gcgtgcgccg gggggcgtga gcctcgtgct ggacggtgc ggctgctgdc 360
gcgtctgcgc caagcagctg ggcgagctgt gcaccgagcg cgaccctgc gaccgcaca 420
agggccttt ctgtgacttc ggtccccgg ccaaccgcaa gatcgcgctg tgcaccgcca 480
aagatgggtg tccctgcate ttgggtggtg cgggtgtacc cagcggagag tccctccaga 540
gcagctgcaa gtaccagtg acgtgcctgg accggggcgt gggctgcatg cccctgtgca 600
gcattggact tctctgcgcc agccttgact gcccttacc gactggaaga cacgtttggc 660
ccagaccbaa ctatgattag agccaactgc ctgggtccaga ccacagagtg gacgcctgt 720
tccaagacct gtgggatggg catctccacc cgggttacca atgacaacgc ctctgcagg 780
ctagagaagc agagccgcct gtgcattggt aggccttgcg aagtgcctg gaagagaaca 840
ttaagaaggg caaaaagtgc atccgtactc ccaaaatctc caagcctatc aagtttgagc 900
tttctggctg caccagcatg aagacatacc gagctaaatt ctgtggagta tgtaccgacg 960
gocgatgctg cccccccac agaaccacca cctgcccgt ggagttcaag tgccctgacg 1020
gcaggtcat gaagagaac atgatgttca tcaagacctg tgccctgcat tacaactgtc 1080
ccggagacaa tgacatcttt gaatcgctgt actacaggaa gatgtaccga gacatggcat 1140
gaagccagag aqtnagagac attaaactcat tagactggaa cttgaactga ttccatctc 1200
atctttccgt aaaaatgatt lcagtagcac aagttattta aatctgtttt tctaactggg 1260
ggaaaagatt cccacccaat tcaaaacatt gtgccatgtc aaacaaatag tctatcaacc 1320

```

```

ccagacactg gtttgaagaa tgttaagact tgacagtggg actacattag tacacagcac 1380
cagaatgtat attaagggtgt qgcctttagga gcagtggggag ggtaccagca gaaagggttag 1440
tatcatcaga tagcalctta tacgagtaat atgcctgcta tttgaagtgt aattgagaag 1500
gaaaattlta gegtgtctac tgacctgcct gtagccccag tgacagctag gatgtgcatt 1560
ctccagccat caagagactg agtcaagtgt ttcccttaagt cagaacagca gactcagctc 1620
tgacattctg attcgaalga cactgttcag gaatcgggat cctgtcgatt agactggaca 1680
gcttgttggc agtgaatttt cctgtaacca gccagatttt ttaaaattta tattgtaaat 1740
attgtgtgtg tctgtgtgtg tgtatatata tatatatgta cagttatcta agttaattta 1800
aagttgtttg tgccttttta ttttggtttt taatgctttg atatttcaat gttagcctca 1860
atttctgaac accataggta gaatgtaaaq cltgtctgat cgttcaaagc atgaaatgga 1920
taattatag gaaattctgc tcagatagaa tgacagtccg tcaaaacaga ttgtttgcaa 1980
aggggaggca tcagtgtcct tggcaggctg atttctaggt aggaaatgtg gtagcctcac 2040
ttttaatgaa caaatggcct ttattaaaaa ctgagtgaat ctatatagct gatcagtttt 2100
ttcacctgga agcattttgt tctactttga tatgactgtt ttccggacag tttattttgt 2160
gagagtgtga ccaaaagtta catgtttgca cctttctagt tgaaaataaa gtgtatatatt 2220
tttctatana aaatgtcgac cggccgctaa tttagtagta gtaggcggca gc 2272

```

```

<210> 13
<211> 1153
<212> DNA
<213> Homo sapiens

```

```

<400> 13
tgaaatatgg agaatagtct tagatgtgtt tgggtaccca agctggcttt tgtactcttc 60
ggagcttctt tgctcagcgc gcattctcaa gtaaccgggt ttcaaattaa agctttcaca 120
gcactgcgct tccctctcaga accttctgat gccgtcacaa tgcggggagg aaatgtcctc 180
ctcgactgct ccgcggagtc cgaccgagga gttccagtga tcaagtggaa gaaagatgca 240
ttcatctggc ctgqggaatg gatgaaagga agcagcaact ttcaaattgg tctctgctga 300
tacaaaacat acttcattcc agacaccaca agccagatga gggactttac caatgtgagg 360
catcttttag agattctggc tcaattatta gtccggacagc aaaagttgca gtagcaggac 420
cactgaggtt cctttcacag acagaatctg tcacagcctt catgggagac acagtgtctac 480
tcaagtgtga aqtcattggg gagcccatgc caacaatcca ctggcagaag aaccaacaag 540
acctgactcc aatcccaggt gactcccgag tgggtggtct gccctctgga gcattgcaga 600
tcagccgact ccaaccgggg gacattggaa tttaccgatg ctccagctcga aatccagcca 660
gctcaagaac aggaatlgaa gcagaagtca gaattttatc agatccagga ctgcatagac 720
agctgtattt tctgcaanga ccatccaatg tagtagccat tgaaggaaaa gatgctgtcc 780
tggaaatgth tgtttctgqc tatctccac caagttttac ctggttacga ggcgagggaag 840
tcatccaact caggtctaaa aagtattctt tattgggtgg aagcaacttg cttatctcca 900
atgtgacaga tgatgacagt ggaatgtata cctgtgttgt cacatataaa aatgagaata 960
ttagtgcctc tgcagagctc acagtcttgg taatcatcga taaagtattg gtggacacct 1020
tttgggtata aggattgcac taggttctgg gaagactaca gaaacatctg aaacctggct 1080
tcagtgggct tegtataatt acaattctga aaatcagttg gccwaatact gtctgaataa 1140
acttttwwtt aaa 1153

```

```

<210> 14
<211> 4459
<212> DNA
<213> Homo sapiens

```

```

<400> 14
tgaaatatgg agaatagtct tagatgtgtt tgggtaccca agctggcttt tgtactcttc 60
ggagcttctt tgctcagcgc gcattctcaa gtaaccgggt ttcaaattaa agctttcaca 120
gcactgcgct tccctctcaga accttctgat gccgtcacaa tgcggggagg aaatgtcctc 180
ctcgactgct ccgcggagtc cgaccgagga gttccagtga tcaagtggaa gaaagatgca 240
ttcatctggc ctgqggaatg gatgaaagga agcagcaact ttcaaattgg tctctgctga 300
tacaaaacat acttcattcc agacaccaca agccagatga gggactttac caatgtgagg 360
catcttttag agattctggc tcaattatta gtccggacagc aaaagttgca gtagcaggac 420
cactgaggtt cctttcacag acagaatctg tcacagcctt catgggagac acagtgtctac 480
tcaagtgtga aqtcattggg gagcccatgc caacaatcca ctggcagaag aaccaacaag 540

```

acctgactcc nateccaggt gactcccgag tgggtggtctt gccctctgga gcattgcaga 600  
 tcaqccgact ccaaccgggg gacattggaa tttaccgatg ctccagctoga aatccagcca 660  
 gctcaagnac agganatgaa gcagaagtca gaattttatc agatccagga ctgcatagac 720  
 agctgtattt tctgcaaaaga ccatccaatg tagtagccat tgaaggaaaa gatgctgtcc 780  
 tggaaatgttg tgtttctggc talcntccac caagttttac ctgggttacga ggcgaggaaag 840  
 tcatccaact caggtctaaa aagtattctt tattgggtgg aagcaacttg cttatctcca 900  
 atgtgacaga tcatgacagt ggaatgtata cctgtgttgt cacatataaa aatgagaata 960  
 ttagtgectc tgcagagctc acagtcttgg ttccgccatg gtttttaaat catccttcca 1020  
 acctgtatgc clatgaaage atggatattg agtttgaatg tacagtctct ggaaagcctg 1080  
 tgcactactg gaattggatg aagaatggag atgtggtcat tccatagtat tattttcaga 1140  
 tagtgaggag aagcnaactta cggatacttg ggggtgtgaa gtcagatgaa ggctttttatc 1200  
 aatgtgtggc tgaanaatqag gctggaaatg cccagaccag tgcacagctc attgtcccta 1260  
 agcctgcaat cccagactcc agtgcctcc cttcggctcc cagagatgtg gtccctgtct 1320  
 tggtttccag ccgatttctc cgtctcagct ggcgccccc tgcagaagcg aaagggaaca 1380  
 ttcaaaacttt cncggtcttt ttctccagag aaggtgacaa cagggaacga gcattgaata 1440  
 caacacagcc tggglccttt cagctcactg tgggaaacct gaagccagaa gccatgtaca 1500  
 cctttctagt tgtggcttac aatgaatggg gaccgggaga gagtctcaa cccatcaagg 1560  
 tggccacaca gctgagttg caagtccag ggcagtaga aaacctgcaa gctgtatcta 1620  
 cctcacctac ctcaattctt attacctggg aacccctgc ctatgcaaac ggtccagctc 1680  
 aaggttacag attgttctgc actgaggtgt ccacaggaaa agaacagaat atagaggttg 1740  
 atggactatc ttatnaactg gaaggcctga aaaaattcac cgaatatagt cttcgattct 1800  
 tagcttataa tctgtatggt cggggtctct ctactgatga tataacagtg gttacacttt 1860  
 ctqaggtgcn aagtgcctcg cctcagaacg tctccttgga agtggctaat tcaagaagta 1920  
 tcaaggttag ctggtctcct cctccatcag gaacacaaaa tggatttatt accggctata 1980  
 aaattcgaca cagaagagag acccgcaggg gtgagatgga aacactggag ccaacaaccc 2040  
 lctggtacct attcacagga ctggagaaag gaagttagta cagtttccag gtgtcagcca 2100  
 tgacagtcaa tggtaactgga ccaucttcca actggtatag tgcagagact ccagagaatg 2160  
 atctagatga atctcaagtt cctgtatcaac caagctctct tcatgtgagg cccagacta 2220  
 actgcacat catqagttgg actcctcctt tgaacccaaa catcgtgttg cgaggttata 2280  
 ttatcgttta tggcgttggg agcctttacg ctgagacagt gngtgtggac agcaagcagc 2340  
 gatattatlc nattgagagg ttagagtcac gtccaccata tghtaatctc ctaaaagctt 2400  
 ttaacaatgc cggagaagga gtccctcttt atgaaagtgc caccaccagg tctataaccg 2460  
 atcccaactga cccagttgat tatlatcctt tgccttgatga ttcccccacc tgggtcccag 2520  
 atctctccac ccccalctc ccaccagtag gtgtacagge tgtggtctct acccatgatg 2580  
 ctglgagggt cngctgggca gacaactctg tccctaagaa ccaaaagacg totgaggtgc 2640  
 gactttacac cgtccgggtg agaaccagct tttctgcaag tgcaaaatcc aagtacagaag 2700  
 acacaacalc tctaaagttac acagcaacag gcctcaaac aaacacaaatg tatgaattct 2760  
 cggctcatggt aacanaaaaac agaaggtcca gtacttggag catgactgca catgccacca 2820  
 cgtatgaagc agccccccac totgetccca aggactttac agtcattact aggggaaggga 2880  
 agcctcgttc cgtcattgtg agttggcagc ctcccttgga agccaatggg aaaattactg 2940  
 cttacatctt atttttatcc ttggacaaga acatcccaat tgatgactgg attatggaaa 3000  
 caatcagltg tcataggett actcatcaaa tcatggatct caacottgat actatgtatt 3060  
 acttttgaat tcaagcagga aattcaaaag gagtggggcc actctctgat cccatcctct 3120  
 tcaggaactc gaaagtggaa caccctgaca aaatggctaa tgaccaaggt cgtcatggag 3180  
 atggaggtta ttggccagtt gatacttaatt tgattgatag aagcacccta aatgagccgc 3240  
 caattggaca aatgcacccc ccgcatggca gtgtcactcc tcagaagaac agcaacctgc 3300  
 ttgtgtatcat tgtgggtcacc gttgggtgca tcacagtgtc ggtagtgtgc atcgtggctg 3360  
 tgatttgcac ccgacgtctc tcagcccagc agagaaagaa acggggccacc cacagtgtctg 3420  
 gcaaaaaggaa gggcagccag aaggacctcc gacccctga tctttggatc catcatgaag 3480  
 aaatggagat gaaaatattt gaaaagccat ctggcactga cctgcagga agggactctc 3540  
 ccacccaag ttgcaagac ctcacaccag ctacgcacag ccagtcaaga acccaactgg 3600  
 gaagcaaaag caactctcat tcaggtcaag acactgagga agcagggagc tctatgtcca 3660  
 ctctggagag gtctctggct gcacgcagag ccccccgggc caagctcatg attcccatgg 3720  
 atgcccaglc caacaaactc gctgtcgtga gcgcacccc ggtgccaacg ctagaaagtg 3780  
 cccagtaacc aggaatctc cctctctcca cctgtggata tccccaccg cagttcactc 3840  
 tccggcctgt gccatttcca acactctcag tggaccgagg ttccggagca ggaagaagtc 3900  
 agtcagtgaq tgaaggaaca actaaccac aaccacctat gctgccccca tctcagcctg 3960  
 agcattctaq cagcagaggag gcaccaagca gaaccatccc cacagcttgt gttcgacca 4020  
 ctacccact ccgcagcttt gctaactctt tgctacctcc accaatgagt gcaatagaac 4080  
 cgaaggtccc ttaacacaca ctlttgtctc agccagggnc cactcttctt aagaccatg 4140  
 tgaaaacagc ctcccttggg ttggctggaa aagcaagatc ccttttgett cctgtgtctg 4200

tgcaacacgc cccgtgaagtg totgaaggaga gccacaaacc aacagaggat tcagccaatg 4260  
 taagtgcato tttaaaattc atgcttcacg aaggagacaga ttgactggcg ctgtgtata 4320  
 gcctctaaac caatgagtag tgtccattca cccagggcca cccagggcca cccaggtcca 4380  
 ttgttgttct tattgttgtt tgttccttgg ttttcctgca cttaaataatg aagaggaaat 4440  
 taaatctatg atattaaaa 4459

<210> 15

<211> 3744

<212> DNA

<213> Homo sapiens

<400> 15

ccgagtgcac aggaggtggg agagggtagc agcatgggct acgagggttg ctgcccacag 60  
 tccccctgct gctgaagctg cccgtcccat gccaccccag gccgtggggc caggggcctg 120  
 ccagggctag gagtgggctt gccgttcctg ggtctctagg gatttccgar atgcctggga 180  
 agagaggctt gggctgtgtg tgggcccggc tgcccccttg cctgctcctc agcctttacg 240  
 gccctgggat gccctcctcc ctgggaaagc ccaaaggcca cctccacatg aattccatcc 300  
 gcatagatgg ggcacacaca ctgggaggcc tgttcccggg gcctggccgg ggctcagagg 360  
 gcaagccctg tggagaactt nagaaggaaa agggcatcca cgggtgggag gccatgctgt 420  
 tcgcccctga tcgcatcaac aacgacccgg acctgctgac taacatcacg ctggggcgccc 480  
 gcattctgga cactctctcc agggacaccc atgcccctga gcagtgcctg acctttgtgc 540  
 aggcgtctat cgagaaggat ggcacagagg tccgctgttg cagtggcggc ccacccatca 600  
 tcaccaagcc tgaactgtgt gtgggtgtca tcggtgcttc agggagctcg gtctccatca 660  
 tgggtggcaa cactccttgc ctcttcaaga taccacagat cagctacgcc tccacagcgc 720  
 cagacctgag tganaacagc cgctacgact tcttctcccg cgtgggtgcc tcggacacgt 780  
 accaggccca ggccatgggt gacatcgtcc gtgcccctca gtggaactat gtgtccacag 840  
 tggcctcggg gggcagctat ggtgagagcg gtgtggaggc cttcatccag aagtcccgtg 900  
 aggacggggg cgtgtgcctc gccagtcgg tgaagatacc accggagccc aaggcaggcg 960  
 agttcgacaa gatcatccgc cgcctcctgg agacttcgaa cggcaggcca gtcacatct 1020  
 ttgccaacga ggatgacatc aggcgtgtgc tggaggcagc acgaagggcc aaccagacag 1080  
 gccatttctt ctggatgggc tctgacagct ggggctccaa gattgcacct gtgtgcacc 1140  
 tggaggaggt ggctgagggt gctgtacaga tccctcccaa gaggatgtcc gtacgagacc 1200  
 gtgagcgact tgggcaggat tcagcttatg agcaggaggg gaagggtgag tttgtgatcg 1260  
 atgcctgtta cggcatgggc cagcgctgc acgcatgca cgtgacctg tgtcccggcc 1320  
 gcgtggggct ctgcccgcgc atggaccctg tagatggcac ccagctgctt aagtacatcc 1380  
 gaaaagctaa cttctcaggg atcgacagga accctgtgac cttcaatgag aatggagatg 1440  
 cgctggggcg ctatgaatc taaccaatcc agctgcgcaa cgattctgcc gagtacaagg 1500  
 tcattggctc ctggactgac cactgcacc ttagaataga gcggtgcaac tggccgggga 1560  
 gcgggcagca gctgcccgc tccatctgca gcctgccctg ccaaccgggt gagcggaaga 1620  
 agacagtga ggcacagcct tgcgtgtgac actgcagacc ttgcacaggg taccagtacc 1680  
 aggtggaccg ctacacctgl aagacgtgtc cctatgacat gcggcccaca gagaaccgca 1740  
 cgggtgcccg gccatccccc atcatcaagc ttgagtgggg ctgcccctgg gccgtgctgc 1800  
 cctctctctt ggccgtgggt ggcategctg ccacgttgtt cgtggtgate acctttgtgc 1860  
 gctacaacga cagcccccac gtcaggccct cgggcctgta actgagctac gtgctgctgc 1920  
 caggcatctt cctgtgctat gccccgaatc ttccctgggac tagggatgag cgtgagccc gacctgggca 1980  
 cctgctcgtt gcgcgaatc taccgcatct tcacagctgg ccacacactt cagcctcctc tcgctgcagc 2040  
 tcaccaagac caaccgcctc taccgcatct tcacagctgg ccacacactt cagcctcctc tcgctgcagc 2160  
 cagcttccat cagccccgac ctgtgtgttg tttgtgtgtg acccctccca ctcggtgggt gacttccagg 2220  
 tgcaggagac actcgacccc cgttcgcca ggggtgtgct caagtgtgac atctcggacc 2280  
 tgtcgtctat ctgcccgtgt ggtacagca tgcgtctcat ggtcacgtgc accgtgtatg 2340  
 ccataaagac acgcccgggt cccgagacct tcaatgaggg caageccatt ggcttcacca 2400  
 tqtacaccac ttgcatcgtc tggctggcct tcatcccat cttctttggc acctcgcagt 2460  
 cggccgacaa gctgtacatc cagacgacga cgtgacggt ctggtgagt ctgagcgcct 2520  
 cgggtgctct gggaatgctc tacatgcaca aagtctacat catcctcttc caccgggagc 2580  
 agaacglgcc caagcgcaag cagcagctca aagcgtcgt taaggcgccc accatgtcca 2640  
 acaagttcac gcagaagggc aacttccggc ccaacggaga ggcacagtct gagctotgct 2700  
 agaaccttga ggcccagcg ctggccacca aacagactta cgtcacttac accaaccatg 2760  
 caatctagcg agtccatgga gctgagcagc aggaggagga gccgtgacct tgtggaagg 2820  
 ggtcggggcc agggccacac ccaagggcc agctgtctt cctgcccgtg ggcacccacg 2880

```

gacgtggctt qqtgctgagg atagcagagc cccagccat cactgctggc agcctgggca 2940
aacggggtga gcaacaggag gacgaggggc cggggcggtg ccaggctacc acaagaacct 3000
gagtccttga ccattgcccc tccgggcccc aaaccacagg ggctcaggtc gtgtggggcc 3060
cagtgcctga tctctccctc ccttcgtctc tctctgtgct gttggcgacc cctctgtctg 3120
tctccagccc tgtctttctg ttctcttata tctttgttcc accttttccc tctctggcgt 3180
ccccggctgc ttgtactctt ggctttttct gtgtctcctt tctggctctt gcctccgct 3240
ctctctctca tctcttttgt cctcagctcc tctgtcttcc ttgggtccca ccagtgtcac 3300
ttttctgcag tttcttttcc tgttctctcc tcttctctcc tcttccagcc attgtctccc 3360
tctccctgcc acccttcccc agttcaccac accttacatg ttgcaaaaga gaaaaaagg 3420
aaaaaaatca aaacacaaaa aagccaaaac gaaaaaaaat ctcgagtgtg ttgccaagt 3480
ctgcctctcc ctggtggcct ctgtgtgtgt cctgtggccc cgcagcctgc ccgcctgcc 3540
cgcccatctg cagtgtgtct tgcctgcctg cccgcctgt ctgctgtctg tcttggccgc 3600
ctgcccgcct gccctctctg ccgaccacac ggagtcaagt gcctgggtgt ttgggtgatg 3660
ttattgacga caatgtgtat cgcattgatt tttttatacc aagaacattt ctaataaaaa 3720
taaacacatg gttttgcaaa aaaa 3744

```

&lt;210&gt; 16

&lt;211&gt; 2899

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 16

```

cgccgggagcc aacttcaggc tgcctcagagg aagcccggtg agtcagtcac ctgggtgcaa 60
gagcgtttgt gccctggggt cctcccgctgc agggagagcg gcactcgctg gcctggatgt 120
ggttggatgt agggggggtc cgcagcaggg gtttctgtgc ggtggcaagc gctgcaacag 180
gtagacggcg agagacggac cccggccgag gcagggatgg agaccaaaag ctaccacagt 240
ctccctgaag gtctagatat ggaagacagg tgggtcaag tttctcaggc tgtggagcgt 300
tcttccctgg gacctacaga ggggacgat gagaataact acatggagat tgtcaacgta 360
agctgtgttt cgggtgctat tccaaacaac agtactcaag gaagcagcaa agaaaaacaa 420
gaactactcc cttgccttca gcaagacaaat aatcggcctg ggattttaac atctgatatt 480
aaaactgagc tgggaatctaa ggaacttcca gcaactgtag ctgagtcctt gggtttatat 540
atggtttctg taagagatgc tgactattcc tatgagcagc agaaccaca aggaagcatg 600
agtccagcta agatttatca gaatgttga cagctggtga aattttacaa aggaaatggc 660
catcgtctct ccactctaag ttgltlgaac acgcccctga gatcatttat gtctgactct 720
gggagctccg tgaatgggtg cgtcatgccc gccattgtta aaagccctat catgtgtcat 780
gagaaaaagc cgtctgtttg cagccctctg aacatgacat cttcggtttg cagccctgct 840
ggaatcaact ctgtgtctc caccacagcc agctttgcca gttttccagt gcacagccca 900
atcaccaggg gaactcctct gacatgctcc cctaagtctg aaaatcgagg ctccaggctc 960
cacagccctg cacatgctag caatgtgggc tctctctct caagtcctt aagtagcatg 1020
aaatcctcaa tttccagccc tccaagtcc tgcagtgtaa aatctccagt ctccagctcc 1080
ataatgtca ctctgagatc ctctgtgtct agccctgcaa atattaacaa ctcaagggtc 1140
tctgtttcca gcccttcgaa cactaataac agatccagc tttccagtc gccagccagt 1200
actgtgggat clatctgtag cctgttaaac aatgccttca gctacactgc ttctggcacc 1260
tctgtgggat ccagtacatt ggggatgtg gttccagtc cagacacgca ggagaaaggt 1320
gctcaagagg tcccttttcc taagactgag gaagtagaga gtgccatctc aaatgggtgt 1380
aclygcagc ttaatatgtt caaglacata aaaccagaac cagatggagc ttttagcagc 1440
tcatgtctag gaggaatat caaaataaat tcggattctt cattctcagt accaataaag 1500
caagaatcaa cnaagcattc atgttcaggg acccttttta aagggaatcc aacagttaac 1560
ccgtttccat tlatgtgtg ctctgtattt tcccttatgg atgataaaga ctattattcc 1620
ctatcaggaa ttttaggacc acctgtgccc ggttttgatg gtaactgtga aggcagcgga 1680
ttcccaqtg gtatttaaca agaaccagat gacgggagct attaccaga gccagcatc 1740
ccttctctg ctattgttg ggtgaattca ggtggacagt ccttccacta caggatttgt 1800
gctcaaggta caalatctt atcagatcgt gctagagacc aatctttcca acacctgagt 1860
tctttctct ctgtcaatcc lttagtggag tcatggaaat cacacggcga cctgtcgtct 1920
agaaqaagt atgggtatcc ggtcttagaa tacattccag aaaatgtatc aagctctact 1980
ttacgaagt tttctaclyg atcttcaaga ccttcaaaaa tatgttttgt gtgtggggat 2040
gaggcttcag gatgccatta tggggtagtc acctgtggca gctgcaaaagt tttcttcaaa 2100
aqagcagtg aagggaacac caactatttt tgtgctggaa gaaatgattg catcattgat 2160
aagattcgac gaagaattg tctgtcttg agacttcaga aatgtcttca agctggaatg 2220
aatttaggag cacgaaagtc aaagaagtgt ggaaggttaa aagggttca cgaggagcag 2280

```

```

ccacagcagc agcagccccc acccccaccc ccacccccgc aaagcccaga ggaagggaca 2340
aggtacatcg ctctctgcaaa agaaccctcg gtcaacacag cactggttcc tcagctctcc 2400
acaatctcac gagcgctcac accttcccc gttatggtcc ttgaaaacat tgaacctgaa 2460
attgtatatg caggcctatga cagctcaaaa ccagatacag ccgaaaatct gctctccacg 2520
ctcaaccgct tagcaggcaa acagatgac caagtctgtg agtgggcaaa ggtacttcca 2580
ggatttaana acttgccctc tgaggaccaa attaccctaa tccagtattc ttggatgtgt 2640
ctatcalcat ttgccttgag ctggagatcg tacaacata cgaacagcca atttctctat 2700
tttgaccacg acctagctct taatgaactg ttggcgagag tgagagaggg ttgaagtctt 2760
agtggcactt cacatgcctc tgtggattct ctgagtgtct ctotgggatg aaggtgactt 2820
ccaccacac cctcttgctg ctgaagcact agttgtgtga gggcagctcc attagacgag 2880
tacacaactc agttgcaaa
2899

```

&lt;210&gt; 17

&lt;211&gt; 2780

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 17

```

cgcgggagcc aacttcaggg tgcacagagg aagcccggtc agtcagtcac ctgggtgcaa 60
gagcgttgtc gcctcgggct ctcccgctgc agggagagcg gcactcgtcg gcctggatgt 120
ggttggtattt aggggggctc cgcagcaggg gtttcgtggc ggtggcaagc gctgcaacag 180
gtagacggcg agagacggac ccgggcccag gcagggatgg agaccaaagg ctaccacagt 240
ctccctgaag gtctagatat ggaaagacgg tggggtcaag tttctcaggc tgtggagcgt 300
tcttccctgg gacctacaga gaggaccgat gagaataact acatggagat tgtcaacgta 360
agctgtgttt ccgtgtctat tccaaacaac agtactcaag gaagcagcaa agaaaaacaa 420
gaactactcc cttgcttcca gcaagacaat aatcggcctg ggattttaac atctgatatt 480
aaaactgagc tggaaatctaa ggaaacttca gcaactgtag ctgagtcctat gggtttatat 540
atggattctg taagagatgc tgactattcc tatggcagc agaaccaaca aggaagcatg 600
agtcacagcta agatttatca gaatgttgaa cagctgggtg aattttacaa aggaatggc 660
catcgtctct ccactctaag ttgtgtgaac acgcccgtga gatcatttat gctgactct 720
gggagctccg tgaalgggtg cgtcctgcgc gccattgtta aaagccctat catgtgtcat 780
gagaaaagcc cgtctgtttg cagccctctg aacatgacat cttcggtttg cagccctgct 840
ggaatcaact ctgtgtctcc caccacagcc agctttggca gttttccagt gcacagccca 900
atcacccagc gaactctct gacatgctcc cctaattgctg aaaatcgagg ctccaggtcg 960
cacagccctg cacatgctag caatgtggc tctctctct caagtccgtt aagtagcatg 1020
aaatctctca tttccagccc tccaagtcac tgcagtgtaa aatctccagt ctccagctcc 1080
aataatgtca ctctgagatc ctctgtgtct agccctgcaa atattaacaa ctcaaggtgc 1140
tcgttttcca gccctctgaa cactaataac agatccacgc tttccagtc ccagccagt 1200
actgtgggat ctatctgtag cctgttaaac aatgccttca gctacactgc tctgtgccc 1260
tctgtctgat ccagtaacat cggggatgtg gttcccagtc cagacacgca ggagaaaggt 1320
gctcaagagg tcccttttcc taagactgag gaagttagaa gtgccatctc aaatggtgtg 1380
actggccagc ttaalatgtt ccagtaacata aaaccagaac cagatggagc ttttagcagc 1440
tcattgtctag gaggaatag caaaataaat tcggattctt cattctcagt accaataaag 1500
caagaatcaa ccaagcattc atgttcaggg acctctttta aagggaatcc aacagttaac 1560
ccgtttccat ttatggatgg ctctgtttt tcccttatgg atgataaaga ctattattcc 1620
ctatcaggaa ttttagganc acctgtgccc ggctttgatg gtaactgtga aggcagcgga 1680
ttccagtggt qtattnaaca aqaacccgat gcaggagct attaccaga ggccagcatc 1740
ccttctctct ctattgttgg ggtgaattca ggtgacagt ccttccacta caggatttgt 1800
gctcaaggta caatatcttt atcacgatcg qctagagacc aatctttcca acacctgagt 1860
tcttthctc ctgtcaatcc ttttagtgag tcatggaaat cacacggcga cctgtcgtct 1920
agaagaagtg atqgtatcc ggtcttagaa tacattccag aaaaatgtatc aagctctact 1980
ttcagaagtg tttctactgg atcttcaaga ccttcaaaaa tatgtttggg gtgtggggat 2040
gaggttcaag gctgcaatta tgggglagtc acctgtggca gctgcaaaag tttcttcaaa 2100
agagcagtgg aagggcaaca caactattta tgtcctggaa gaaatgattg catcattgat 2160
aagattcgac gaaagaattg tctgtcttgc agacttcaga aatgtcttca agctgggaatg 2220
aatttaggag ccgaaaagtc aaagaagttg ggaaggttaa aagggttcca cgaggagcag 2280
ccacgcagc agcagccccc acccccaccc ccacccccgc aaagcccaga ggaagggaca 2340
acgtacatcg ctctctgcaaa agaaccctcg gtcaacacag cactggttcc tcagctctcc 2400
acaatctcac gagcgctcac accttcccc gttatggtcc ttgaaaacat tgaacctgaa 2460
attgtatatg caggctatga cagctcaaaa ccagatacag ccgaaaatct gctctccacg 2520

```

ctcaaccgct	tagcnggcaa	acagatgato	caagtcgtga	agtgggcaaa	ggtaacttcca	2580
ggatttataaa	acltgcctct	tgaggaccaa	attaccctaa	tccagtatto	ttggatgtgt	2640
ctatcatcat	ttgccttgag	ctggaqatcg	tacaaacata	cgaacagcca	atttctctat	2700
tttgccaccag	acctagtctt	taatgaataa	gtacctatta	attagccttc	ataaaataaa	2760
ctgcagagtt	atgcggttaa					2780

&lt;210&gt; 18

&lt;211&gt; 3239

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 18

ggcaacacgc	ttttaccagg	aactcgctat	aaccacgaat	accgcttgtg	agccagtaag	60
ccgctcttag	ccnnaatgat	agagggggcat	ttctccgggg	gcttatagtg	aggatatgca	120
agccatggct	tcttcacagc	ataatcatag	gacagaaaga	gctttaaaat	ttgtgcttta	180
gtaagagttt	cttgggaaaa	gatcttccaa	acatatgttc	catctgttga	tggtcagga	240
tcttcctttt	ctctcacaga	gggcacaatc	ccaataactgt	taatgaacaa	atctgaatta	300
tcagtggtta	aaactglatt	aaggccaaat	ttatctatgg	gtctagagct	aaagatagat	360
gtattcaatt	cccccttaac	taaagttgtc	actatatgtt	gataatattg	atggaattcc	420
tcaattggag	gtctcaaaagt	gagaaaaagta	atattcgaca	tttttcgatt	caacggagtg	480
qccaccaaga	cgatgtcata	gaagtctgaa	cgagtctcag	ttccaatttg	gtagaccact	540
tcatacatct	ttgttggatt	tcctgtgtac	ttgggtctttg	ttttctcctc	gatgtacatt	600
actgagccag	atataagatt	gcttttggat	gcctgcagaa	gccttgagca	aacaagttta	660
ttgccacctt	ctactgccca	aaggccagaa	tcagaacagg	acagtgcac	cgccccaca	720
aagccattqa	tgtccgtgct	ttggccataa	ttgacctca	taacaggagc	aatcatttca	780
ttgaggaaact	tctcagaaaa	gcgggctttt	tqcaaggttt	caagaagtgt	tcgattaagc	840
attccaagga	agtcattctc	tcctagagca	tgaagtaatt	tttcgacact	actgaaggca	900
tagtcatgag	actggtagcg	gtagatcctc	atgaacttgt	ctaacacgtc	ctctaccac	960
atgtgcatac	ggagggattg	aaatccatag	cgccaaacta	atttaatcac	gttaattatg	1020
aaccagttgc	tctctctcaa	taccagagtc	tctccattat	atatccccag	taggccacc	1080
agaggctgat	gctcaacctg	gggcgcctgc	aactgggtgt	gttgggctc	acctgctgct	1140
gggcagtgcc	gagtgccggc	aagctgggag	ccgtgtacac	agaagggtgg	ttcgtggaag	1200
gcgtcaataa	gaagctcgcc	ctcctgggtg	actctgtgga	catcttcaag	ggcatcccc	1260
tcgcagctcc	caaccaaggcc	ctggaaaatc	ctcagccaca	tcttggtcgg	caagggaccc	1320
tgaaggccaa	gaacttcaag	aagagatgcc	tgcaggccac	catcaccacg	gacagcacct	1380
acgggcatga	agactgcctg	tacctcaaca	tttgggtgcc	ccagggcagg	aagcaagtct	1440
cccgggacct	gcccgtttatg	atctggatct	atggaggcgc	cttctcatg	gggtccggcc	1500
atggggccaa	cttctctaac	aactacctgt	atgacggcga	ggagatcgcc	acacgcggaa	1560
acgtcatcgt	ggtcaccttc	aactaccgtg	tggccccct	tgggttccct	agcactgggg	1620
acgccaatct	gcccaggtaac	tatggccttc	gggatcaqca	catggccatt	gcttgggtga	1680
agaggaaatl	cqcggtcttc	gggggggacc	ccaacaacat	cacgtctctc	ggggagtctg	1740
ctggaggtgc	cagcgtctct	ctgcagaccc	tctcccccta	caacaagggc	ctcatccggc	1800
gagccatcag	ccagagcggc	gtggccctga	gtccctgggt	catccagaaa	aaacctctct	1860
tctgggccaa	aaaggtggct	gagaaggtgg	gttgccctgt	gggtgatgcc	gccaggatgg	1920
cccagtgctc	gaaggttact	gatccccgag	ccctgacgct	ggcctataag	gtgcccgtgg	1980
caggcctgga	gtacccccatg	ctgcactatg	tgggcttcgt	ccctgtcatt	gatggagact	2040
tcattccccg	tgacccgato	aacctgtacg	ccaacgcgcg	cgacatcgac	tatatagcag	2100
gcaccaacaa	catggacggc	cacatctctg	ccagcatcga	catgcctgcc	atcaacaagg	2160
gcaacaagaa	agtcacggag	gaggacttct	acaagctggt	cagtgaagtc	acaatcacca	2220
aggggctcag	agggcgcgaag	acgacctttg	atgtctacac	cgagtccttg	gcccaggacc	2280
catcccagga	gaataagaag	aagactgtgg	tggactttga	gaccgatgtc	ctcttctctg	2340
tgcaccoga	gtccgcctta	gcccagcaca	gaagagtgcc	caagagtgcc	aagacctacg	2400
cctacctgtt	ttcccatccc	tctcggatgc	ccgtctaccc	caaatgggtg	ggggccgacc	2460
atgcagatga	caltcaqlac	gttttgggga	agcccttcgc	cacccccacg	ggctaccggc	2520
cccaaqacag	gacagtctct	aaggccatga	tgcctactg	gaccaacttt	gccaaaacag	2580
gggacccccaa	catggggcag	tcggctgtgc	ccacacactg	ggaaccttac	actacggaaa	2640
acagccqgcta	cctggagatc	accaagaaga	tgggcagcag	ctccatgaag	cggagcctga	2700
gaaccaactt	ccctgcctac	tggacctca	cctatctggc	gtgcccaca	gtgaccgacc	2760
aggaggccac	ccctgtgccc	cccacagggg	actccgaggc	cactcccgtg	ccccccacgg	2820
gtgactccga	gacccgcccc	gtgcgcacca	cgggtgactc	cggggcccc	cccggtgcgc	2880

```

ccacgggtga ctccggggcc ccccccggtc cggccacggg tgactccggg gcccccccg 2940
tgccggccac ggggtgactcc gggggccccc ccgtgccgcc cccgggtgac tccggggccc 3000
cccccgtycc gcccccgtag cccccacggg tgactccgag accgcccccg tgccggccac 3060
gggtgactcc gggggccccc ctgtgcccc cactgactcc aaggaagctc agatgcctgc 3120
agtcattagg ttttagctgc ccattgagct tggtatcaag aggccacaag agtgggaccc 3180
caggggctcc cctcccatct tgagctcttc ctgaataaag cctcataccc ctgaaaaaa 3239

```

```

<210> 19
<211> 917
<212> DNA
<213> Homo sapiens

```

```

<400> 19
ggcagcagca gccccggagc cggggccagg gtccacctgt ccccgacgcy ccggctcgcy 60
ccctctgccc gcagccaccc agccggcgctc tagcgcccc acctcgccac catgagagcc 120
ctgctgggcy gccgtctct ctgctgctctg gtcgtgagcy actccaaag cagcaatgaa 180
cttcattcaag ttcctatcgaa ctgtgactgt ctaaattggag gaacatgtgt gtccaacaag 240
tactttctca acatttactg gtgcaactgc ccaaagaaat tcggagggca gcactgtgaa 300
atagataagt caaaaacctg ctatgagggg aatggctcact ttaccgagg aaaggccagc 360
actgacacca tggggccggcc ctgcctgccc tggaactctg ccactgtctc tcagcaaacg 420
taacctgccc acagatctga tgcctctcag ctgggcctgg ggaaacataa ttactgcagg 480
gaggtggggg cacaaggacc aaaagccctc cctacagttc ccagaaacct tgttaccatc 540
cccttctccc agagggtctg ccattagcaca agagaagtgc agctctggt tgagtcttcc 600
ctgaggggag gaggcaggga aggcctctct ggttggaaatg acatccctta tctttctgtg 660
ttgccaggaa ccagacaaac cggaggcgac cctgggtgcta tgtgcagggtg ggccctaaagc 720
cgcttctcca agagtgcatt gtgcattgact ggcagatgg tgagcatcac ttgacctgct 780
gatgacagtg ggttgggaag ggacaaaactt acatgtcccc ttattccatc acaggaggac 840
tgaggaggtg gggggtgccc gagagggatg ctttctccta cctgcctccc taagacatcc 900
ctctgtttgt cctccag
917

```

```

<210> 20
<211> 1819
<212> DNA
<213> Homo sapiens

```

```

<400> 20
aagggtacatg ttctgtctct attaactatt tttcacagga aaaacagtgg ataggaccca 60
acttagggct cttgccacgc ttgttagtat aagcccgtta tctccaaaac tatctaacca 120
ttgagctgtt ttgctggaat gagagcttgt gtaatagcaa ccaccagttt tccactacga 180
aatcttccac agggtttagt aattcaagac attccaagag aggtctctggc tattttttga 240
catagcaaat ggaactcaaa ctctctcccc tcaaaaatata aacagaagtc agacaacaga 300
agactaaaac ccagaggggt gaagaaagcc actcctcttg tagagtcgct gatttttttt 360
ttctctctct cttttccctt gtcttcttta gaaggccaaa aagtgcattc gtactcccaa 420
aatctccaag cctatcaagt ttgagctttc tggctgcacc agcatgaaga cataccgagc 480
taaatctgtt ggagtatgta ccgacggccg atgctgcacc cccacacaga ccaccacct 540
gccgttgag ttcaagtccc ctgacggcga ggtcatgaag aagaacatga tgttcatcaa 600
gacctgtgac tgcattaca actgtccggg agacaatgac atctttgaat cgctgtacta 660
caggaaagtg taaggagaca tggcatgaag ccagagagtg agagacatta actcattaga 720
ctggaaactg aactgattca catctcattt ttcgtaaaaa atgatttcag tagcacaagt 780
tatttaaatc tgtttttcta actgggggaa aagattccca ccaattcaa aacattgtgc 840
catgtcaaac aaatagleta tcaaccccag acactggttt gaagaatgtt aagacttgac 900
agtggaaacta cattagtaca cagcaccaga atgtatatta aggtgtggct ttaggagcag 960
tgggagggtg ccagcagaaa ggttagtata atcagatagc atcttatagc agtaatatgc 1020
ctgctatttg aagtgttaatt gagaaggaaa attttagcgt gctcactgac ctgcctgtag 1080
ccccagtgc agctaggatg tgcattctcc agccatcaag agactgagtc aagttgttcc 1140
ttaagtccga ccagcagact cagctctgac attctgattc gaatgacact gttcagggaat 1200
cggaaatctg tcattagac tggacagctt gtggcaagtg aatttgctg taacaagcca 1260
gattttttaa aatttatatt gtaaatattg tgtgtgtgtg tgtgtgtgta tatatatata 1320
tatgtacagt latctaagtt aatttaaagt tgtttgtgac tttttatatt tgtttttaat 1380

```

```

gctttgatat ttcaatqgta gcntcaattt ctgaacacca taggtagaat gtaaagcttg 1440
tctgatcggt caaagcaiga aatggatact tatatggaaa ttctgctcag atagaatgac 1500
agtcogtcaa aacagattgt ttgcaaaagg gaggcacag tgtccttggc aggctgattt 1560
ctaggttagga aalgtggtag cctcactttt aatgaacaaa tggcctttat taaaaactga 1620
gtgactctat atagclgato agttttttca cctggaagca ttgttttcta ctttgatatg 1680
actgtttttc ggacagttta tttgttgaga gtgtgaccaa aagttacatg tttgcacctt 1740
tctagttaga aataaagtg atattttttc tataaaaaat gtgcacgagg ccgcgaattt 1800
agtagtagta ggcgycagc
1819

```

```

<210> 21
<211> 2294
<212> DNA
<213> Homo sapiens

```

```

<400> 21
tcacaacaac ttttcccgcc tgagaggaga cagccagtgc gactccaccc tccagctcga 60
cgycagccgc cccggccgac agccccgaga cgacagcccg gcgcgtcccg gtccccacct 120
ccgaccaccc ccagcgctcc agggcccgcc gctccccgct cgcgcgccac gccgcctccg 180
ctccgcccgc agtgccaaac atgaccgcgg ccagtatggg cccgcgtccg gtgccttccg 240
tggtcctcct cgcctctctg agccggccgg ccgtcggcca gaactgcagc gggccgtgcc 300
ggtgcccgga cgagccggcg ccgcgtctgc cggcggggcg gaggcctcgt ctggacggct 360
gcggtgtctg ccgcgtctgc gccaaagcagc tgggcgagct gtgcaccgag cgcgacccct 420
gcgaccgcga caagggcctc ttctgtgact tgggtccccc ggccaaccgc aagatcggcg 480
tgtgcaccgc caaagatggt gctccctgca tcttcgggtg tacggtgtac cgcagcggag 540
agtccttcca gacagctgc aagtaaccag gcacgtgcct ggaaggggcg gtgggctgca 600
tgccctctgt cagcatggac gttcgtctgc ccagccctga ctgccccttc ccgagcttac 660
cgactggaag acacgttttg cccagaccca actatgatta gagccaactg cctgggtccag 720
accacagagt ggagcgctgt ttccaagacc tgtgggatgg gcattctccac cggggttacc 780
aatgacaaag cctcctgcag gctagagaag cagagccgcc tgtgcatggt caggccttgc 840
gaagtgaact ggaagagaac attangaagg gcaaaaagt catcctgact cccaaaatct 900
ccaagcctat caagttttag ctttctgggt gcaccagcat gaagacatac cgagctaaat 960
tctgtggagt atgtaccgan ggcgatgct gcacccccca cagaaccacc accctgcccg 1020
tggagttcaa gtgcctgac ggcgaggtca tgaagaagaa catgatgttc atcaagacct 1080
gtgcctgcon ttacactgt cccggagaca atgacatctt tgaatcgctg tactacagga 1140
agatgtacgg agacatggca tgaagccaga gagtgagaga cattaactca ttgactgga 1200
acttgaactg attccatct ctttttccg taaaatgat ttcagttaga caagttattt 1260
aaatctgttt ttctaaactg gggaaaagat tcccacccaa ttcaaaacat tgtgccatgt 1320
caaacaaata gtctatcaac cccagacact gttttgaaga atgttaagac ttgacagtgg 1380
aactacatth gtacacagca ccagaatgta tattaaggtg tggctttagg agcagtggga 1440
gggtaccagc agaaaggtta gtatcatcag atagcatctt atacgagtaa tatgcctgct 1500
atltgaagtg taattgagaa ggaattttt agcgtgctca ctgacctgcc tgtagcccca 1560
gtgacagcta ggaatgtgat tctccagcca tcaagagact gagtcaagtt gttccttaag 1620
tcagaacagc agactcagct ctgacattct gattcgaatg acactgttca ggaatcggaa 1680
tctgtcgat tagactggac agcttctggc aagtgaattt gcctgtaaca agccagattt 1740
tttaaaatct atattgtaaa tattgtgtgt gtgtgtgtgt gtgtatatat atatatatgt 1800
acagttatct aagtttaatt aaagttgttt gtgccttttt atttttgttt ttaatgcttt 1860
gatatttcaa tgttagcctc aatttctgaa cccataggt agaattgaaa gcttgtctga 1920
tcgttcaaag catgaaatgg atacttatat ggaaattctg ctacagataga atgacagtc 1980
gtcaaancaq attgttttga aaggggaggc atcagtgtcc ttggcaggct gatttctagg 2040
taggaatgt ggtagcctca cttttaatga acaaatggcc ttattataaa actgagtga 2100
tctatataac tgatcagttt ttccacctgg aagcatttgt ttctactttg atatgactgt 2160
ttttcggaca gtttattttgt tgagagtgtg accaaaagtt acatgtttgc acctttctag 2220
ttgaaaataa agtgttatatt tttctataa aaaatgtcga cgcggccgag aatttagtag 2280
tagtaggcgg cagc
2294

```

```

<210> 22
<211> 594
<212> DNA
<213> Homo sapiens

```

&lt;400&gt; 22

```

tgaatatgga agaagagtct tagatgtgtt tgggtaccca agctggcttt tgtactcttc 60
ggagcttctt tgcacagcgc gcatcttcaa gtaaccgggt ttcaaattaa agctttcaca 120
gcactgcgct tctctcaga accttctgat gccgtcaca tgcggggagg aaatgtcctc 180
ctcgactgct ccgaggagtc cgcacgagga gttccagtga tcaagtggaa gaaagatgca 240
ttcatctggc cttgggaatg gatgaaagga agcagcaact ttcaaattgg tctctgctga 300
tcaaaaacat acttcattcc agacaccaca agccagatga gggactttac caatgtgagg 360
catctttagg agattctggc tcaattatta gtccgacagc aaaagttgca gtagcaggtc 420
ctacttagtc tagtctcctc ttggaagact gatcagaata actcattttc atcaataaca 480
ggacaattgg gcagaatcac cactccttca tgcactctcc tagtgagggt ctgagaaaag 540
tgaatatgga aagatgtgat tttgtcagggt ggtgctataa agaattacat ctca 594

```

&lt;210&gt; 23

&lt;211&gt; 881

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 23

```

cttatacnag cgttatgaga tcaagngac caagatgtat aaagggttcc aagccttang 60
ggatgccgct gacatccggt tctgtacac cccgccatg gagagtgtct gccgatactt 120
ccacaggtcc cacaaccgca gcagaggagt ttctcattgc tggaaaactg caggatggac 180
tcttgacat cactacctgc agtttctgtg ctccctggaa cagcctgagc ttagctcagc 240
gccggggctt caccaagacc tacaactgtt gctgtgagga atgcaagggc gaattccagc 300
acactggcgg ccgttactag tggatccgag ctccgtacca agcttgatgc atagcttgag 360
tattctatag tgtcacctaa atagottggc gtaatcatgg tcatagctgt ttctgtgtg 420
aaattgttat ccgctcaca ttccacacaa cataccagcc ggaagcataa agtgtaagc 480
ctgggggtgc taatgagtga gctaactcac attaattggc ttgcgctcac tgcctgcttt 540
ccagtccgga aacctgtcgt gccagctgca ttaattgaat gcccaacgcy cggggagagg 600
cgggttgctt attggcgct ctccgcttc ctccgtcact gactcgtgc gtcggctgt 660
tcngctgctg ccagcggctat cagctcactc aaangcggta atccggttn cacagaatca 720
ggggataacg cagaaagaac atgtgagcaa aaggcagcaa aahggcagga accgnaaaag 780
gcngttnatg cgttcttct aagctccgc cctgacnag catncaaaant tnacgctcag 840
tanagggggg aacccgncag acttaaaant ccagcgttcc c 881

```

&lt;210&gt; 24

&lt;211&gt; 893

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 24

```

cttatacnag cgttatgaga tcaagngac caaggtatcc cctgcccccg cctctttccc 60
agcattttct aacatcttcc tctgtgtcaa aacagaaact tctggccact ggttgggtgcg 120
agaaagtgg ctgtgatctt gggatgctat atgacttcag ggaagaacct ggagtgggag 180
gattatgtcg gtaaaagaga cauttccctc catccatcaa cagatgtata aagggttcca 240
agccttaggg gatgcgctg acatccggtt cgtctacacc cccgccatgg agagtgtctg 300
cggatacttc cacaggtccc acaaccgcag ccaggagttt ctctattgctg gtgaggcacc 360
gtccccgcgc cctgtgccac accaaccagt ccttggggcg cggcctagca accacgaggg 420
ggcgaggctc tgatgggaat ggtcccactg gaaatgggga ccaccccaat ttcagtctat 480
cagaaggccy ggcttttggc agcttggcag ctccagccaat cacaagctgc ttgtcgggtc 540
ccgccccgc cttctcttca ggaaaactgc aggatggact cttgcacatc actacctgca 600
gttttgtggc tccctggaa agcctgagct tagctcagcg cgggggcttc accaagacct 660
acactgttgg ctgtgaggaa tgcaaggcg aattccagca cactggcgcc cgttctagt 720
gatccnagct cggnccaagc ttgatgcata gcttgagtat tctatagtgn cactaaata 780
gottggcgta tcatgggcat agctgttct gnggaaatng ntatccgtna caattccnca 840
cacatnncan ccggaagnta aagngnaagc ctgggtgona tgagngacta ctn 893

```

&lt;210&gt; 25

<211> 887  
 <212> DNA  
 <213> Homo sapiens

<400> 25

```

tcgacggccc cttgggtttt gcaactgatgg tgggtgggat agtaatgcat ccaggaagcc 60
tggaggcctg tgggtttccg acccgctgcc acccccgccc ctacgctgga catttatcct 120
ctagcgctca ggccttgcg ccacgcgcgc agatccagcg ccagagaga caccagagaa 180
cccacatgg ccccttttga gcccctggct tctggcatcc tgttgttgc gtggctgata 240
gccccagca gggcctgcac ctgtgtccca ccccaccac agacggcctt ctgcaattcc 300
gacctgctca tcagggccaa gttcgtgggg acaccagaag tcaaccagac caccattatac 360
cagcgttatg agatcaagat gaccaagatg tataaagggt tccaagcctt aggggatgcc 420
gtgacatcc ggttcctcta ccccccgcc atggagagtg tctgcggata cttccacagg 480
atggactctt gcacatcact acctgcagtt tctgtggctc ctggaacagc ctgagcttag 540
ctcagcgccg gggcttcacc aagacctaca ctgttggctg tgaggaatgc acagtgtttc 600
cctgtttatc catccctgc aaactgcaga gtggcactca ttgcttgtgg acggaccagc 660
tctccaaagg ccttgaaaag ggcttcaggt cccgtcacct tgccctgctg cctcgggagc 720
cagggctgtg caccctggag tccctgcggt cccagatagc ctgaatcctg cccggagtgg 780
aagctgaagc ctgcacagtg tccacctgt tccactccc atctttcttc cggacaatga 840
aataaagagt taaccacca acccaataaa actgatgtta ctagcca 887

```

<210> 26  
 <211> 814  
 <212> DNA  
 <213> Homo sapiens

<400> 26

```

tcgacggccc cttgggtttt gcaactgatgg tgggtgggat agtaatgcat ccaggaagcc 60
tggaggcctg tgggtttccg acccgctgcc acccccgccc ctacgctgga catttatcct 120
ctagcgctca ggccttgcg ccacgcgcgc agatccagcg ccagagaga caccagattc 180
tgcaattccg acctcgtcat cagggccaaag tctgtgggga caccagaagt caaccagacc 240
accttatacc agcgttatga gatcaagatg accaagatgt ataaagggtt ccaagcctta 300
gggggatgcc ctgacatccg gttcgtctac acccccgcca tggagagtgt ctgcggatac 360
ttccacaggt cccacnaccg cagcagggag tttctcattg ctggaact gcaggatgga 420
ctcttgacac tcaactacct cagtttcgtg gctccctgga acagcctgag cttagctcag 480
cgccggggct tcaaccaagac ctacactgtt ggctgtgagg aatgcacagt gtttccctgt 540
ttatccatcc cctgcaaaact gcagagtggc actcattgct tgtggacgga ccagctcctc 600
caaggctctg aaaagggtt ccagtcctgt caccctgcct gcctgcctcg ggagccaggg 660
ctgtgcacct ggcagtcctt gcggtccag atagcctgaa tctgcccgg agtgggaagct 720
gaagcctgca cagtgtccac cctgltccca ctcccatctt tcttcggac aatgaaataa 780
agagttacca cccagcagaa aaaacaaaca agtc 814

```

<210> 27  
 <211> 481  
 <212> PRT  
 <213> Homo sapiens

<400> 27

```

Met Arg Glu Asn Met Ala Arg Gly Pro Cys Asn Ala Pro Arg Trp Val
1           5           10           15
Ser Leu Met Val Leu Val Ala Ile Gly Thr Ala Val Thr Ala Ala Val
20           25           30
Asn Pro Gly Val Val Val Arg Ile Ser Gln Lys Gly Leu Asp Tyr Ala
35           40           45
Ser Gln Gln Gly Thr Ala Ala Leu Gln Lys Glu Leu Lys Arg Ile Lys
50           55           60

```

Ile Pro Asp Tyr Ser Asp Ser Phe Lys Ile Lys His Leu Gly Lys Gly  
 65 70 75 80  
 His Tyr Ser Phe Tyr Ser Met Asp Ile Arg Glu Phe Gln Leu Pro Ser  
 85 90 95  
 Ser Gln Ile Ser Met Val Pro Asn Val Gly Leu Lys Phe Ser Ile Ser  
 100 105 110  
 Asn Ala Asn Ile Lys Ile Ser Gly Lys Trp Lys Ala Gln Lys Arg Phe  
 115 120 125  
 Leu Lys Met Ser Gly Asn Phe Asp Leu Ser Ile Glu Gly Met Ser Ile  
 130 135 140  
 Ser Ala Asp Leu Lys Leu Gly Ser Asn Pro Thr Ser Gly Lys Pro Thr  
 145 150 155 160  
 Ile Thr Cys Ser Ser Cys Ser Ser His Ile Asn Ser Val His Val His  
 165 170 175  
 Ile Ser Lys Ser Lys Val Gly Trp Leu Ile Gln Leu Phe His Lys Lys  
 180 185 190  
 Ile Glu Ser Ala Leu Arg Asn Lys Met Asn Ser Gln Val Cys Glu Lys  
 195 200 205  
 Val Thr Asn Ser Val Ser Ser Lys Leu Gln Pro Tyr Phe Gln Thr Leu  
 210 215 220  
 Pro Val Met Thr Lys Ile Asp Ser Val Ala Gly Ile Asn Tyr Gly Leu  
 225 230 235 240  
 Val Ala Pro Pro Ala Thr Thr Ala Glu Thr Leu Asp Val Gln Met Lys  
 245 250 255  
 Gly Glu Phe Tyr Ser Glu Asn His His Asn Pro Pro Pro Phe Ala Pro  
 260 265 270  
 Pro Val Met Glu Phe Pro Ala Ala His Asp Arg Met Val Tyr Leu Gly  
 275 280 285  
 Leu Ser Asp Tyr Phe Phe Asn Thr Ala Gly Leu Val Tyr Gln Glu Ala  
 290 295 300  
 Gly Val Leu Lys Met Thr Leu Arg Asp Asp Met Ile Pro Lys Glu Ser  
 305 310 315 320  
 Lys Phe Arg Leu Thr Thr Lys Phe Phe Gly Thr Phe Leu Pro Glu Val  
 325 330 335  
 Ala Lys Lys Phe Pro Asn Met Lys Ile Gln Ile His Val Ser Ala Ser  
 340 345 350  
 Thr Pro Pro His Leu Ser Val Gln Pro Thr Gly Leu Thr Phe Tyr Pro  
 355 360 365  
 Ala Val Asp Val Gln Ala Phe Ala Val Leu Pro Asn Ser Ser Leu Ala  
 370 375 380

Ser Leu Phe Leu Ile Gly Met Gly Lys Gln Phe Leu Gly Trp Thr Asp  
385 390 395 400

Glu Glu Pro Gln Thr Val Pro Thr Ala Leu Ser Leu Glu Ser Gly Asp  
405 410 415

His Val Asn Pro Val Trp Ile Gln Thr Trp Thr Val Ser Leu Arg Ser  
420 425 430

Leu Arg Leu Glu Ser Leu Tyr Ser Met Val Pro Thr Pro Gly Gly Ile  
435 440 445

His Ser Pro Ser His Ser Leu Val Arg Leu Phe Thr Tyr Ser Phe Asn  
450 455 460

Tyr Ser Phe Ser Gln Phe Leu Ile His Ser Xaa Ile His Ser Met Leu  
465 470 475 480

Ala

<210> 28

<211> 628

<212> PRT

<213> Homo sapiens

<400> 28

Met Gly Arg Leu Gln Leu Val Val Leu Gly Leu Thr Cys Cys Trp Ala  
1 5 10 15

Val Ala Ser Ala Ala Lys Leu Gly Ala Val Tyr Thr Glu Gly Gly Phe  
20 25 30

Val Glu Gly Val Asn Lys Lys Leu Gly Leu Leu Gly Asp Ser Val Asp  
35 40 45

Ile Phe Lys Gly Ile Pro Phe Ala Ala Pro Thr Lys Ala Leu Glu Asn  
50 55 60

Pro Gln Pro His Pro Gly Trp Gln Gly Thr Leu Lys Ala Lys Asn Phe  
65 70 75 80

Lys Lys Arg Cys Leu Gln Ala Thr Ile Thr Gln Asp Ser Thr Tyr Gly  
85 90 95

Asp Glu Asp Cys Leu Tyr Leu Asn Ile Trp Val Pro Gln Gly Arg Lys  
100 105 110

Gln Val Ser Arg Asp Leu Pro Val Met Ile Trp Ile Tyr Gly Gly Ala  
115 120 125

Phe Leu Met Gly Ser Gly His Gly Ala Asn Phe Leu Asn Asn Tyr Leu  
130 135 140

Tyr Asp Gly Glu Glu Ile Ala Thr Arg Gly Asn Val Ile Val Val Thr  
145 150 155 160

Phe Asn Tyr Arg Val Gly Pro Leu Gly Phe Leu Ser Thr Gly Asp Ala  
165 170 175

Asn Leu Pro Gly Asn Tyr Gly Leu Arg Asp Gln His Met Ala Ile Ala  
 180 185 190  
 Trp Val Lys Arg Asn Ile Ala Ala Phe Gly Gly Asp Pro Asn Asn Ile  
 195 200 205  
 Thr Leu Phe Gly Glu Ser Ala Gly Gly Ala Ser Val Ser Leu Gln Thr  
 210 215 220  
 Leu Ser Pro Tyr Asn Lys Gly Leu Ile Arg Arg Ala Ile Ser Gln Ser  
 225 230 235 240  
 Gly Val Ala Leu Ser Pro Trp Val Ile Gln Lys Asn Pro Leu Phe Trp  
 245 250 255  
 Ala Lys Lys Val Ala Glu Lys Val Gly Cys Pro Val Gly Asp Ala Ala  
 260 265 270  
 Arg Met Ala Gln Cys Leu Lys Val Thr Asp Pro Arg Ala Leu Thr Leu  
 275 280 285  
 Ala Tyr Lys Val Pro Leu Ala Gly Leu Glu Tyr Pro Met Leu His Tyr  
 290 295 300  
 Val Gly Phe Val Pro Val Ile Asp Gly Asp Phe Ile Pro Ala Asp Pro  
 305 310 315 320  
 Ile Asn Leu Tyr Ala Asn Ala Ala Asp Ile Asp Tyr Ile Ala Gly Thr  
 325 330 335  
 Asn Asn Met Asp Gly His Ile Phe Ala Ser Ile Asp Met Pro Ala Ile  
 340 345 350  
 Asn Lys Gly Asn Lys Lys Val Thr Glu Glu Asp Phe Tyr Lys Leu Val  
 355 360 365  
 Ser Glu Phe Thr Ile Thr Lys Gly Leu Arg Gly Ala Lys Thr Thr Phe  
 370 375 380  
 Asp Val Tyr Thr Glu Ser Trp Ala Gln Asp Pro Ser Gln Glu Asn Lys  
 385 390 395 400  
 Lys Lys Thr Val Val Asp Phe Glu Thr Asp Val Leu Phe Leu Val Pro  
 405 410 415  
 Thr Glu Ile Ala Leu Ala Gln His Arg Ala Asn Ala Lys Ser Ala Lys  
 420 425 430  
 Thr Tyr Ala Tyr Leu Phe Ser His Pro Ser Arg Met Pro Val Tyr Pro  
 435 440 445  
 Lys Trp Val Gly Ala Asp His Ala Asp Asp Ile Gln Tyr Val Phe Gly  
 450 455 460  
 Lys Pro Phe Ala Thr Pro Thr Gly Tyr Arg Pro Gln Asp Arg Thr Val  
 465 470 475 480  
 Ser Lys Ala Met Ile Ala Tyr Trp Thr Asn Phe Ala Lys Thr Gly Asp  
 485 490 495  
 Pro Asn Met Gly Asp Ser Ala Val Pro Thr His Trp Glu Pro Tyr Thr

500 505 510  
 Thr Glu Asn Ser Gly Tyr Leu Glu Ile Thr Lys Lys Met Gly Ser Ser  
 515 520 525  
 Ser Met Lys Arg Ser Leu Arg Thr Asn Phe Leu Arg Tyr Trp Thr Leu  
 530 535 540  
 Thr Tyr Leu Ala Leu Pro Thr Val Thr Asp Gln Glu Ala Thr Pro Val  
 545 550 555 560  
 Pro Pro Thr Gly Asp Ser Glu Ala Thr Pro Val Pro Pro Thr Gly Asp  
 565 570 575  
 Ser Glu Thr Ala Pro Val Pro Pro Thr Gly Asp Ser Gly Ala Pro Pro  
 580 585 590  
 Val Pro Pro Thr Gly Asp Ser Gly Ala Pro Pro Val Pro Pro Thr Gly  
 595 600 605  
 Asp Ser Gly Ala Pro Pro Val Pro Pro Thr Gly Asp Ser Glu Ala Arg  
 610 615 620  
 Ala His Leu Gly  
 625  
 <210> 29  
 <211> 641  
 <212> PRT  
 <213> Homo sapiens  
 <400> 29  
 Leu Leu Leu Leu Gly Phe Leu Leu Val Ser Leu Glu Ser Thr Leu Ser  
 1 5 10 15  
 Ile Pro Pro Trp Glu Ala Pro Lys Glu His Lys Tyr Lys Ala Glu Glu  
 20 25 30  
 His Thr Val Val Leu Thr Val Thr Gly Glu Pro Cys His Phe Pro Phe  
 35 40 45  
 Gln Tyr His Arg Gln Leu Tyr His Lys Cys Thr His Lys Gly Arg Pro  
 50 55 60  
 Gly Pro Gln Pro Trp Cys Ala Thr Thr Pro Asn Phe Asp Gln Asp Gln  
 65 70 75 80  
 Arg Trp Gly Tyr Cys Leu Glu Pro Lys Lys Val Lys Asp His Cys Ser  
 85 90 95  
 Lys His Ser Pro Cys Gln Lys Gly Gly Thr Cys Val Asn Met Pro Ser  
 100 105 110  
 Gly Pro His Cys Leu Cys Pro Gln His Leu Thr Gly Asn His Cys Gln  
 115 120 125  
 Lys Glu Lys Cys Phe Glu Pro Gln Leu Leu Arg Phe Phe His Lys Asn  
 130 135 140  
 Glu Ile Trp Tyr Arg Thr Glu Gln Ala Ala Val Ala Arg Cys Gln Cys

145	150	155	160
Lys Gly Pro Asp Ala His Cys Gln Arg Leu Ala Ser Gln Ala Cys Arg	165	170	175
Thr Asn Pro Cys Leu His Gly Gly Arg Cys Leu Glu Val Glu Gly His	180	185	190
Arg Leu Cys His Cys Pro Val Gly Tyr Thr Gly Pro Phe Cys Asp Val	195	200	205
Asp Thr Lys Ala Ser Cys Tyr Asp Gly Arg Gly Leu Ser Tyr Arg Gly	210	215	220
Leu Ala Arg Thr Thr Leu Ser Gly Ala Pro Cys Gln Pro Trp Ala Ser	225	230	235
Glu Ala Thr Tyr Arg Asn Val Thr Ala Glu Gln Ala Arg Asn Trp Gly	240	245	250
Leu Gly Gly His Ala Phe Cys Arg Asn Pro Asp Asn Asp Ile Arg Pro	255	260	265
Trp Cys Phe Val Leu Asn Arg Asp Arg Leu Ser Trp Glu Tyr Cys Asp	270	275	280
Leu Ala Gln Cys Gln Thr Pro Thr Gln Ala Ala Pro Pro Thr Pro Val	285	290	295
Ser Pro Arg Leu His Val Pro Leu Met Pro Ala Gln Pro Ala Pro Pro	300	305	310
Lys Pro Gln Pro Thr Thr Arg Thr Pro Pro Gln Ser Gln Thr Pro Gly	315	320	325
Ala Leu Pro Ala Lys Arg Glu Gln Pro Pro Ser Leu Thr Arg Asn Gly	330	335	340
Pro Leu Ser Cys Gly Gln Arg Leu Arg Lys Ser Leu Ser Ser Met Thr	345	350	355
Arg Val Val Gly Gly Leu Val Ala Leu Arg Gly Ala His Pro Tyr Ile	360	365	370
Ala Ala Leu Tyr Trp Gly His Ser Phe Cys Ala Gly Ser Leu Ile Ala	375	380	385
Pro Cys Trp Val Leu Thr Ala Ala His Cys Leu Gln Asp Arg Pro Ala	390	395	400
Pro Glu Asp Leu Thr Val Val Leu Gly Gln Glu Arg Arg Asn His Ser	405	410	415
Cys Glu Pro Cys Gln Thr Leu Ala Val Arg Ser Tyr Arg Leu His Glu	420	425	430
Ala Phe Ser Pro Val Ser Tyr Gln His Asp Leu Ala Leu Leu Arg Leu	435	440	445
Gln Glu Asp Ala Asp Gly Ser Cys Ala Leu Leu Ser Pro Tyr Val Gln	450	455	460
	465	470	475
			480

Pro Val Cys Leu Pro Ser Gly Ala Ala Arg Pro Ser Glu Thr Thr Leu  
485 490 495

Cys Gln Val Ala Gly Trp Gly His Gln Phe Glu Gly Ala Glu Glu Tyr  
500 505 510

Ala Ser Phe Leu Gln Glu Ala Gln Val Pro Phe Leu Ser Leu Glu Arg  
515 520 525

Cys Ser Ala Pro Asp Val His Gly Ser Ser Ile Leu Pro Gly Met Leu  
530 535 540

Cys Ala Gly Phe Leu Glu Gly Gly Thr Asp Ala Cys Ala Gly Glu Leu  
545 550 555 560

Leu Ala Gly Trp Arg Pro Ser Pro Arg Pro Ser Ala Xaa Ser Gln Val  
565 570 575

His Ser Ala Asp Cys Val Phe Pro Thr Gln Gly Asp Ser Gly Gly Pro  
580 585 590

Leu Val Cys Glu Asp Gln Ala Ala Glu Arg Arg Leu Thr Leu Gln Gly  
595 600 605

Ile Ile Ser Trp Gly Ser Gly Cys Gly Asp Arg Asn Lys Pro Gly Val  
610 615 620

Tyr Thr Asp Val Ala Tyr Tyr Leu Ala Trp Ile Arg Glu His Thr Val  
625 630 635 640

Ser

<210> 30

<211> 164

<212> PRT

<213> Homo sapiens

<400> 30

Met Ala Pro Phe Glu Pro Leu Ala Ser Gly Ile Leu Leu Leu Trp  
1 5 10 15

Leu Ile Ala Pro Ser Arg Ala Cys Thr Cys Val Pro Pro His Pro Gln  
20 25 30

Thr Ala Phe Cys Asn Ser Asp Leu Val Ile Arg Ala Lys Phe Val Gly  
35 40 45

Thr Pro Glu Val Asn Gln Thr Thr Leu Tyr Gln Arg Tyr Glu Ile Lys  
50 55 60

Met Thr Lys Met Tyr Lys Gly Phe Gln Ala Leu Gly Asp Ala Ala Asp  
65 70 75 80

Ile Arg Phe Val Tyr Thr Pro Ala Met Glu Ser Val Cys Gly Tyr Phe  
85 90 95

His Arg Ser His Asn Arg Ser Glu Glu Phe Leu Ile Ala Gly Lys Leu  
100 105 110

Gln Asp Gly Leu Leu His Ile Thr Thr Cys Ser Phe Val Ala Pro Trp  
115 120 125

Asn Ser Leu Ser Leu Ala Gln Arg Arg Gly Phe Thr Lys Thr Tyr Thr  
130 135 140

Val Gly Cys Glu Glu Cys Thr Val Phe Pro Cys Ser His Ser His Leu  
145 150 155 160

Ser Ser Gly Gln

<210> 31

<211> 123

<212> PRT

<213> Homo sapiens

<400> 31

Met Ala Pro Phe Glu Pro Leu Ala Ser Gly Ile Leu Leu Leu Leu Trp  
1 5 10 15

Leu Ile Ala Pro Ser Arg Ala Cys Thr Cys Val Pro Pro His Pro Gln  
20 25 30

Thr Ala Phe Cys Asn Ser Asp Leu Val Ile Arg Ala Lys Phe Val Gly  
35 40 45

Thr Pro Glu Val Asn Gln Thr Thr Leu Tyr Gln Arg Tyr Glu Ile Lys  
50 55 60

Met Thr Lys Met Tyr Lys Gly Phe Gln Ala Leu Gly Asp Ala Ala Asp  
65 70 75 80

Ile Arg Phe Val Tyr Thr Pro Ala Met Glu Ser Val Cys Gly Tyr Phe  
85 90 95

His Arg Ser His Asn Arg Ser Glu Glu Phe Leu Ile Ala Gly Lys Leu  
100 105 110

Gln Val Val Met Cys Lys Ser Pro Ser Val Val  
115 120

<210> 32

<211> 211

<212> PRT

<213> Homo sapiens

<400> 32

Met Ala Pro Phe Glu Pro Leu Ala Ser Gly Ile Leu Leu Leu Leu Trp  
1 5 10 15

Leu Ile Ala Pro Ser Arg Ala Cys Thr Cys Val Pro Pro His Pro Gln  
20 25 30

Thr Ala Phe Cys Asn Ser Asp Leu Val Ile Arg Ala Lys Phe Val Gly  
35 40 45

Thr Pro Glu Val Asn Gln Thr Thr Leu Tyr Gln Arg Tyr Glu Ile Lys

50 55 60

Met Thr Lys Met Tyr Lys Gly Phe Gln Ala Leu Gly Asp Ala Ala Asp  
65 70 75 80

Ile Arg Phe Val Tyr Thr Pro Ala Met Glu Ser Val Cys Gly Tyr Phe  
85 90 95

His Arg Ser His Asn Arg Ser Glu Glu Phe Leu Ile Leu Leu Gly Lys  
100 105 110

Leu Gln Asp Gly Ile Phe Ala His Ser Leu Thr Cys Ser Phe Cys Trp  
115 120 125

Val Pro Trp Glu Asn Ser Leu Ser Leu Ala Gln Arg Arg Gly Phe Thr  
130 135 140

Lys Thr Tyr Thr Val Gly Cys Glu Glu Cys Thr Val Phe Pro Cys Leu  
145 150 155 160

Ser Ile Pro Cys Lys Leu Gln Ser Gly Thr His Cys Leu Trp Thr Asp  
165 170 175

Gln Leu Leu Gln Gly Ser Glu Lys Gly Phe Gln Ser Arg His Leu Ala  
180 185 190

Cys Leu Pro Arg Glu Pro Gly Leu Cys Thr Trp Gln Ser Leu Arg Ser  
195 200 205

Gln Ile Ala  
210

<210> 33  
<211> 160  
<212> PRT  
<213> Homo sapiens

<400> 33

Met Ala Pro Phe Glu Pro Leu Ala Ser Gly Ile Leu Leu Leu Leu Trp  
1 5 10 15

Leu Ile Ala Pro Ser Arg Ala Cys Thr Cys Val Pro Pro His Pro Gln  
20 25 30

Thr Ala Phe Cys Asn Ser Asp Leu Val Ile Arg Ala Lys Phe Val Gly  
35 40 45

Thr Pro Glu Val Asn Gln Thr Thr Leu Tyr Gln Arg Tyr Glu Ile Lys  
50 55 60

Met Thr Lys Met Tyr Lys Gly Phe Gln Ala Leu Gly Asp Ala Ala Asp  
65 70 75 80

Ile Arg Phe Val Tyr Thr Pro Ala Met Glu Ser Val Cys Gly Tyr Phe  
85 90 95

His Arg Ser His Asn Arg Ser Glu Glu Phe Leu Ile Leu Ser Ile Pro  
100 105 110

Cys Lys Leu Gln Ser Gly Thr His Cys Leu Trp Thr Asp Gln Leu Leu

115 120 125  
 Gln Gly Ser Gln Lys Gly Phe Gln Ser Arg His Leu Ala Cys Leu Pro  
 130 135 140  
 Arg Glu Pro Gly Leu Cys Thr Trp Gln Ser Leu Arg Ser Gln Ile Ala  
 145 150 155 160

<210> 34  
 <211> 197  
 <212> PRT  
 <213> Homo sapiens

<400> 34  
 Met Ala Pro Phe Glu Pro Leu Ala Ser Gly Ile Leu Leu Leu Trp  
 1 5 10 15  
 Leu Ile Ala Pro Ser Arg Ala Cys Thr Cys Val Pro Pro His Pro Gln  
 20 25 30  
 Thr Ala Phe Cys Asn Ser Asp Leu Val Ile Arg Ala Lys Phe Val Gly  
 35 40 45  
 Thr Pro Glu Val Asn Gln Thr Thr Leu Tyr Gln Arg Tyr Glu Ile Lys  
 50 55 60  
 Met Thr Lys Met Tyr Lys Gly Phe Gln Ala Leu Gly Asp Ala Ala Asp  
 65 70 75 80  
 Ile Arg Phe Val Tyr Thr Pro Ala Met Glu Ser Val Cys Gly Tyr Phe  
 85 90 95  
 His Arg Ala Gly Lys Leu Gln Asp Gly Leu Leu His Ile Thr Thr Cys  
 100 105 110  
 Ser Phe Val Ala Pro Trp Asn Ser Leu Ser Leu Ala Gln Arg Arg Gly  
 115 120 125  
 Phe Thr Lys Thr Tyr Thr Val Gly Cys Glu Glu Cys Thr Val Phe Pro  
 130 135 140  
 Cys Leu Ser Ile Pro Cys Lys Leu Gln Ser Gly Thr His Cys Leu Trp  
 145 150 155 160  
 Thr Asp Gln Leu Leu Gln Gly Ser Glu Lys Gly Phe Gln Ser Arg His  
 165 170 175  
 Leu Ala Cys Leu Pro Arg Glu Pro Gly Leu Cys Thr Trp Gln Ser Leu  
 180 185 190  
 Arg Ser Gln Ile Ala  
 195

<210> 35  
 <211> 494  
 <212> PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 35

Met Arg Ala Leu Leu Ala Arg Leu Leu Leu Cys Val Leu Val Val Ser  
 1 5 10 15  
 Asp Ser Lys Gly Ser Asn Glu Leu His Gln Val Pro Ser Asn Cys Asp  
 20 25 30  
 Cys Leu Asn Gly Gly Thr Cys Val Ser Asn Lys Tyr Phe Ser Asn Ile  
 35 40 45  
 His Trp Cys Asn Cys Pro Lys Lys Phe Gly Gly Gln His Cys Glu Ile  
 50 55 60  
 Asp Lys Ser Lys Thr Cys Tyr Glu Gly Asn Gly His Phe Tyr Arg Gly  
 65 70 75 80  
 Lys Ala Ser Thr Asp Thr Met Gly Arg Pro Cys Leu Pro Trp Asn Ser  
 85 90 95  
 Ala Thr Val Leu Gln Gln Thr Tyr His Ala His Arg Ser Asp Ala Leu  
 100 105 110  
 Gln Leu Gly Leu Gly Lys His Asn Tyr Cys Arg Glu Val Gly Ala Gln  
 115 120 125  
 Gly Pro Lys Ala Leu Pro Thr Val Pro Arg Asn Leu Val Thr Ile Pro  
 130 135 140  
 Phe Ser Gln Arg Ala Gly His Ser Thr Arg Glu Val Gln Pro Leu Val  
 145 150 155 160  
 Glu Ser Ser Leu Arg Gly Gly Gly Arg Glu Gly Pro Leu Gly Trp Asn  
 165 170 175  
 Asp Ile Pro Tyr Leu Ser Val Leu Pro Gly Asn Pro Asp Asn Arg Arg  
 180 185 190  
 Arg Pro Trp Cys Tyr Val Gln Val Gly Leu Lys Pro Leu Val Gln Glu  
 195 200 205  
 Cys Met Val His Asp Cys Ala Asp Gly Lys Lys Pro Ser Ser Pro Pro  
 210 215 220  
 Glu Glu Leu Lys Phe Gln Cys Gly Gln Lys Thr Leu Arg Pro Arg Phe  
 225 230 235 240  
 Lys Ile Ile Gly Gly Glu Phe Thr Thr Ile Glu Asn Gln Pro Trp Phe  
 245 250 255  
 Ala Ala Ile Tyr Arg Arg His Arg Gly Gly Ser Val Thr Tyr Val Cys  
 260 265 270  
 Gly Gly Ser Leu Ile Ser Pro Cys Trp Val Ile Ser Ala Thr His Cys  
 275 280 285  
 Phe Ile Asp Tyr Pro Lys Lys Glu Asp Tyr Ile Val Tyr Leu Gly Arg  
 290 295 300  
 Ser Arg Leu Asn Ser Asn Thr Gln Gly Glu Met Lys Phe Glu Val Glu



100										105					110				
Glu	Ile	Ser	Thr	Thr	Asp	Ala	Ile	Phe	Val	Gln	Arg	Asp	Leu	Lys	Leu				
		115					120					125							
Val	Gln	Gly	Phe	Met	Pro	His	Phe	Phe	Arg	Leu	Phe	Arg	Ser	Thr	Val				
		130				135						140							
Lys	Gln	Val	Asp	Phe	Ser	Glu	Val	Glu	Arg	Ala	Arg	Phe	Ile	Ile	Asn				
					150					155					160				
Asp	Trp	Val	Lys	Thr	His	Thr	Lys	Gly	Met	Ile	Ser	Asn	Leu	Leu	Gly				
				165					170					175					
Lys	Gly	Ala	Val	Asp	Gln	Leu	Thr	Arg	Leu	Val	Leu	Val	Asn	Ala	Leu				
			180					185					190						
Tyr	Phe	Asn	Gly	Gln	Trp	Lys	Thr	Pro	Phe	Pro	Asp	Ser	Ser	Thr	His				
		195					200					205							
Arg	Arg	Leu	Phe	His	Lys	Ser	Asp	Gly	Ser	Thr	Val	Ser	Val	Pro	Met				
		210				215					220								
Met	Ala	Gln	Thr	Asn	Lys	Phe	Asn	Tyr	Thr	Glu	Phe	Thr	Thr	Pro	Asp				
					230					235					240				
Gly	His	Tyr	Tyr	Asp	Ile	Leu	Glu	Leu	Pro	Tyr	His	Gly	Asp	Thr	Leu				
				245					250					255					
Ser	Met	Phe	Ile	Ala	Ala	Asp	Leu	Val	Pro	Thr	Glu	Ala	Leu	Cys	Arg				
			260					265					270						
Met	Glu	Leu	Arg	Gly	Leu	Gln	Glu	Leu	Leu	Cys	Ala	Trp							
		275					280					285							
<210> 37																			
<211> 399																			
<212> PRT																			
<213> Homo sapiens																			
<400> 37																			
Met	Gln	Met	Ser	Pro	Ala	Leu	Thr	Cys	Leu	Val	Leu	Gly	Leu	Ala	Leu				
1				5					10					15					
Val	Phe	Gly	Glu	Gly	Ser	Ala	Val	His	His	Pro	Pro	Ser	Tyr	Val	Ala				
			20					25					30						
His	Leu	Ala	Ser	Asp	Phe	Gly	Val	Arg	Val	Phe	Gln	Gln	Val	Ala	Gln				
			35				40					45							
Ala	Ser	Lys	Asp	Arg	Asn	Val	Val	Phe	Ser	Pro	Tyr	Gly	Val	Ala	Ser				
		50				55					60								
Val	Leu	Ala	Met	Leu	Gln	Leu	Thr	Thr	Gly	Gly	Glu	Thr	Gln	Gln	Gln				
					70					75					80				
Ile	Gln	Ala	Ala	Met	Gly	Phe	Lys	Ile	Asp	Asp	Lys	Gly	Met	Ala	Pro				
				85					90					95					
Ala	Leu	Arg	His	Leu	Tyr	Lys	Glu	Leu	Met	Gly	Pro	Trp	Asn	Lys	Asp				

100	105	110
Glu Ile Ser Thr Thr Asp Ala Ile Phe Val Gln Arg Asp Leu Lys Leu 115 120 125		
Val Gln Gly Phe Met Pro His Phe Phe Arg Leu Phe Arg Ser Thr Val 130 135 140		
Lys Gln Val Asp Phe Ser Glu Val Glu Arg Ala Arg Phe Ile Ile Asn 145 150 155 160		
Asp Trp Val Lys Thr His Thr Lys Gly Met Ile Ser Asn Leu Leu Gly 165 170 175		
Lys Gly Ala Val Asp Gln Leu Thr Arg Leu Val Leu Val Asn Ala Leu 180 185 190		
Tyr Phe Asn Gly Gln Trp Lys Thr Pro Phe Pro Asp Ser Ser Thr His 195 200 205		
Arg Arg Leu Phe His Lys Ser Asp Gly Ser Thr Val Ser Val Pro Met 210 215 220		
Met Ala Gln Thr Asn Lys Phe Asn Tyr Thr Glu Phe Thr Thr Pro Asp 225 230 235 240		
Gly His Tyr Tyr Asp Ile Leu Glu Leu Pro Tyr His Gly Asp Thr Leu 245 250 255		
Ser Met Phe Ile Ala Ala Pro Tyr Glu Lys Glu Val Pro Leu Ser Ala 260 265 270		
Leu Thr Asn Ile Leu Ser Ala Gln Leu Ile Ser His Trp Lys Gly Asn 275 280 285		
Met Thr Arg Leu Pro Arg Leu Leu Val Leu Pro Lys Phe Ser Leu Glu 290 295 300		
Thr Glu Val Asp Leu Arg Lys Pro Leu Glu Asn Leu Gly Met Thr Asp 305 310 315 320		
Met Phe Arg Gln Phe Gln Ala Asp Phe Thr Ser Leu Ser Asp Gln Glu 325 330 335		
Pro Leu His Val Ala Gln Ala Leu Gln Lys Val Lys Ile Glu Val Asn 340 345 350		
Glu Ser Gly Thr Val Ala Ser Ser Ser Thr Ala Val Ile Val Ser Ala 355 360 365		
Arg Met Ala Pro Glu Glu Ile Ile Met Asp Arg Pro Phe Leu Phe Val 370 375 380		
Val Pro Pro Gln Lys Gln Cys Ala Trp Val Ile Leu Glu Cys Arg 385 390 395		

<210> 38  
 <211> 317  
 <212> PRT  
 <213> Homo sapiens

&lt;400&gt; 38

Met Thr Ala Ala Ser Met Gly Pro Val Arg Val Ala Phe Val Val Leu  
 1 5 10 15  
 Leu Ala Leu Cys Ser Arg Pro Ala Val Gly Gln Asn Cys Ser Gly Pro  
 20 25 30  
 Cys Arg Cys Pro Asp Glu Pro Ala Pro Arg Cys Pro Ala Gly Val Ser  
 35 40 45  
 Leu Val Leu Asp Gly Cys Gly Cys Cys Arg Val Cys Ala Lys Gln Leu  
 50 55 60  
 Gly Glu Leu Cys Thr Glu Arg Asp Pro Cys Asp Pro His Lys Gly Leu  
 65 70 75 80  
 Phe Cys Asp Phe Gly Ser Pro Ala Asn Arg Lys Ile Gly Val Cys Thr  
 85 90 95  
 Ala Lys Asp Gly Ala Pro Cys Ile Phe Gly Gly Thr Val Tyr Arg Ser  
 100 105 110  
 Gly Glu Ser Phe Gln Ser Ser Cys Lys Tyr Gln Cys Thr Cys Leu Asp  
 115 120 125  
 Gly Ala Val Gly Cys Met Pro Leu Cys Ser Met Asp Val Arg Leu Pro  
 130 135 140  
 Ser Pro Asp Cys Pro Leu Pro Leu Glu Asp Thr Phe Gly Pro Asp Pro  
 145 150 155 160  
 Thr Met Ile Arg Ala Asn Cys Leu Val Gln Thr Thr Glu Trp Ser Ala  
 165 170 175  
 Cys Ser Lys Thr Cys Gly Met Gly Ile Ser Thr Arg Val Thr Asn Asp  
 180 185 190  
 Asn Ala Ser Cys Arg Leu Glu Lys Gln Ser Arg Leu Cys Met Val Arg  
 195 200 205  
 Pro Cys Glu Ser Asp Leu Glu Glu Asn Ile Lys Lys Gly Lys Lys Cys  
 210 215 220  
 Ile Arg Thr Pro Lys Ile Ser Lys Pro Ile Lys Phe Glu Leu Ser Gly  
 225 230 235 240  
 Cys Thr Ser Met Lys Thr Tyr Arg Ala Lys Phe Cys Gly Val Cys Thr  
 245 250 255  
 Asp Gly Arg Cys Cys Thr Pro His Arg Thr Thr Thr Leu Pro Val Glu  
 260 265 270  
 Phe Lys Cys Pro Asp Gly Glu Val Met Lys Lys Asn Met Met Phe Ile  
 275 280 285  
 Lys Thr Cys Ala Cys His Tyr Asn Cys Pro Gly Asp Asn Asp Ile Phe  
 290 295 300  
 Glu Ser Leu Tyr Tyr Arg Lys Met Tyr Gly Asp Met Ala  
 305 310 315

<210> 39  
 <211> 342  
 <212> PRT  
 <213> Homo sapiens

<400> 39

Asn	Met	Glu	Asn	Ser	Leu	Arg	Cys	Val	Trp	Val	Pro	Lys	Leu	Ala	Phe
1				5					10					15	
Val	Leu	Phe	Gly	Ala	Ser	Leu	Leu	Ser	Ala	His	Leu	Gln	Val	Thr	Gly
			20					25					30		
Phe	Gln	Ile	Lys	Ala	Phe	Thr	Ala	Leu	Arg	Phe	Leu	Ser	Glu	Pro	Ser
		35					40					45			
Asp	Ala	Val	Thr	Met	Arg	Gly	Gly	Asn	Val	Leu	Leu	Asp	Cys	Ser	Ala
	50					55					60				
Glu	Ser	Asp	Arg	Gly	Val	Pro	Val	Ile	Lys	Trp	Lys	Lys	Asp	Ala	Ile
65					70					75					80
His	Leu	Ala	Leu	Gly	Met	Asp	Glu	Arg	Lys	Gln	Gln	Leu	Ser	Asn	Gly
				85					90					95	
Ser	Leu	Leu	Ile	Gln	Asn	Ile	Leu	His	Ser	Arg	His	His	Lys	Pro	Asp
			100					105					110		
Glu	Gly	Leu	Tyr	Gln	Cys	Glu	Ala	Ser	Leu	Gly	Asp	Ser	Gly	Ser	Ile
		115					120					125			
Ile	Ser	Arg	Thr	Ala	Lys	Val	Ala	Val	Ala	Gly	Pro	Leu	Arg	Phe	Leu
		130				135					140				
Ser	Gln	Thr	Glu	Ser	Val	Thr	Ala	Phe	Met	Gly	Asp	Thr	Val	Leu	Leu
145					150					155					160
Lys	Cys	Glu	Val	Ile	Gly	Glu	Pro	Met	Pro	Thr	Ile	His	Trp	Gln	Lys
				165					170					175	
Asn	Gln	Gln	Asp	Leu	Thr	Pro	Ile	Pro	Gly	Asp	Ser	Arg	Val	Val	Val
			180					185					190		
Leu	Pro	Ser	Gly	Ala	Leu	Gln	Ile	Ser	Arg	Leu	Gln	Pro	Gly	Asp	Ile
		195					200					205			
Gly	Ile	Tyr	Arg	Cys	Ser	Ala	Arg	Asn	Pro	Ala	Ser	Ser	Arg	Thr	Gly
		210				215					220				
Asn	Glu	Ala	Glu	Val	Arg	Ile	Leu	Ser	Asp	Pro	Gly	Leu	His	Arg	Gln
225					230					235					240
Leu	Tyr	Phe	Leu	Gln	Arg	Pro	Ser	Asn	Val	Val	Ala	Ile	Glu	Gly	Lys
				245					250					255	
Asp	Ala	Val	Leu	Glu	Cys	Cys	Val	Ser	Gly	Tyr	Pro	Pro	Pro	Ser	Phe
			260					265						270	
Thr	Trp	Leu	Arg	Gly	Glu	Glu	Val	Ile	Gln	Leu	Arg	Ser	Lys	Lys	Tyr
		275					280						285		

Ser Leu Leu Gly Gly Ser Asn Leu Leu Ile Ser Asn Val Thr Asp Asp  
290 295 300

Asp Ser Gly Met Tyr Thr Cys Val Val Thr Tyr Lys Asn Glu Asn Ile  
305 310 315 320

Ser Ala Ser Ala Glu Leu Thr Val Leu Val Ile Ile Asp Lys Val Leu  
325 330 335

Val Asp Thr Phe Trp Val  
340

<210> 40

<211> 1433

<212> PRT

<213> Homo sapiens

<400> 40

Asn Met Glu Asn Ser Leu Arg Cys Val Trp Val Pro Lys Leu Ala Phe  
1 5 10 15

Val Leu Phe Gly Ala Ser Leu Leu Ser Ala His Leu Gln Val Thr Gly  
20 25 30

Phe Gln Ile Lys Ala Phe Thr Ala Leu Arg Phe Leu Ser Glu Pro Ser  
35 40 45

Asp Ala Val Thr Met Arg Gly Gly Asn Val Leu Leu Asp Cys Ser Ala  
50 55 60

Glu Ser Asp Arg Gly Val Pro Val Ile Lys Trp Lys Lys Asp Ala Ile  
65 70 75 80

His Leu Ala Leu Gly Met Asp Glu Arg Lys Gln Gln Leu Ser Asn Gly  
85 90 95

Ser Leu Leu Ile Gln Asn Ile Leu His Ser Arg His His Lys Pro Asp  
100 105 110

Glu Gly Leu Tyr Gln Cys Glu Ala Ser Leu Gly Asp Ser Gly Ser Ile  
115 120 125

Ile Ser Arg Thr Ala Lys Val Ala Val Ala Gly Pro Leu Arg Phe Leu  
130 135 140

Ser Gln Thr Glu Ser Val Thr Ala Phe Met Gly Asp Thr Val Leu Leu  
145 150 155 160

Lys Cys Glu Val Ile Gly Glu Pro Met Pro Thr Ile His Trp Gln Lys  
165 170 175

Asn Gln Gln Asp Leu Thr Pro Ile Pro Gly Asp Ser Arg Val Val Val  
180 185 190

Leu Pro Ser Gly Ala Leu Gln Ile Ser Arg Leu Gln Pro Gly Asp Ile  
195 200 205

Gly Ile Tyr Arg Cys Ser Ala Arg Asn Pro Ala Ser Ser Arg Thr Gly  
210 215 220

Asn Glu Ala Glu Val Arg Ile Leu Ser Asp Pro Gly Leu His Arg Gln  
 225 230 235 240  
 Leu Tyr Phe Leu Gln Arg Pro Ser Asn Val Val Ala Ile Glu Gly Lys  
 245 250 255  
 Asp Ala Val Leu Glu Cys Cys Val Ser Gly Tyr Pro Pro Pro Ser Phe  
 260 265 270  
 Thr Trp Leu Arg Gly Glu Glu Val Ile Gln Leu Arg Ser Lys Lys Tyr  
 275 280 285  
 Ser Leu Leu Gly Gly Ser Asn Leu Leu Ile Ser Asn Val Thr Asp Asp  
 290 295 300  
 Asp Ser Gly Met Tyr Thr Cys Val Val Thr Tyr Lys Asn Glu Asn Ile  
 305 310 315 320  
 Ser Ala Ser Ala Glu Leu Thr Val Leu Val Pro Pro Trp Phe Leu Asn  
 325 330 335  
 His Pro Ser Asn Leu Tyr Ala Tyr Glu Ser Met Asp Ile Glu Phe Glu  
 340 345 350  
 Cys Thr Val Ser Gly Lys Pro Val Pro Thr Val Asn Trp Met Lys Asn  
 355 360 365  
 Gly Asp Val Val Ile Pro Ser Asp Tyr Phe Gln Ile Val Gly Gly Ser  
 370 375 380  
 Asn Leu Arg Ile Leu Gly Val Val Lys Ser Asp Glu Gly Phe Tyr Gln  
 385 390 395 400  
 Cys Val Ala Glu Asn Glu Ala Gly Asn Ala Gln Thr Ser Ala Gln Leu  
 405 410 415  
 Ile Val Pro Lys Pro Ala Ile Pro Ser Ser Ser Val Leu Pro Ser Ala  
 420 425 430  
 Pro Arg Asp Val Val Pro Val Leu Val Ser Ser Arg Phe Val Arg Leu  
 435 440 445  
 Ser Trp Arg Pro Pro Ala Glu Ala Lys Gly Asn Ile Gln Thr Phe Thr  
 450 455 460  
 Val Phe Phe Ser Arg Glu Gly Asp Asn Arg Glu Arg Ala Leu Asn Thr  
 465 470 475 480  
 Thr Gln Pro Gly Ser Leu Gln Leu Thr Val Gly Asn Leu Lys Pro Glu  
 485 490 495  
 Ala Met Tyr Thr Phe Arg Val Val Ala Tyr Asn Glu Trp Gly Pro Gly  
 500 505 510  
 Glu Ser Ser Gln Pro Ile Lys Val Ala Thr Gln Pro Glu Leu Gln Val  
 515 520 525  
 Pro Gly Pro Val Glu Asn Leu Gln Ala Val Ser Thr Ser Pro Thr Ser  
 530 535 540

Ile Leu Ile Thr Trp Glu Pro Pro Ala Tyr Ala Asn Gly Pro Val Gln  
 545 550 555 560  
 Gly Tyr Arg Leu Phe Cys Thr Glu Val Ser Thr Gly Lys Glu Gln Asn  
 565 570 575  
 Ile Glu Val Asp Gly Leu Ser Tyr Lys Leu Glu Gly Leu Lys Lys Phe  
 580 585 590  
 Thr Glu Tyr Ser Leu Arg Phe Leu Ala Tyr Asn Arg Tyr Gly Pro Gly  
 595 600 605  
 Val Ser Thr Asp Asp Ile Thr Val Val Thr Leu Ser Asp Val Pro Ser  
 610 615 620  
 Ala Pro Pro Gln Asn Val Ser Leu Glu Val Val Asn Ser Arg Ser Ile  
 625 630 635 640  
 Lys Val Ser Trp Leu Pro Pro Pro Ser Gly Thr Gln Asn Gly Phe Ile  
 645 650 655  
 Thr Gly Tyr Lys Ile Arg His Arg Lys Thr Thr Arg Arg Gly Glu Met  
 660 665 670  
 Glu Thr Leu Glu Pro Asn Asn Leu Trp Tyr Leu Phe Thr Gly Leu Glu  
 675 680 685  
 Lys Gly Ser Gln Tyr Ser Phe Gln Val Ser Ala Met Thr Val Asn Gly  
 690 695 700  
 Thr Gly Pro Pro Ser Asn Trp Tyr Thr Ala Glu Thr Pro Glu Asn Asp  
 705 710 715 720  
 Leu Asp Glu Ser Gln Val Pro Asp Gln Pro Ser Ser Leu His Val Arg  
 725 730 735  
 Pro Gln Thr Asn Cys Ile Ile Met Ser Trp Thr Pro Pro Leu Asn Pro  
 740 745 750  
 Asn Ile Val Val Arg Gly Tyr Ile Ile Gly Tyr Gly Val Gly Ser Pro  
 755 760 765  
 Tyr Ala Glu Thr Val Arg Val Asp Ser Lys Gln Arg Tyr Tyr Ser Ile  
 770 775 780  
 Glu Arg Leu Glu Ser Ser Ser His Tyr Val Ile Ser Leu Lys Ala Phe  
 785 790 795 800  
 Asn Asn Ala Gly Glu Gly Val Pro Leu Tyr Glu Ser Ala Thr Thr Arg  
 805 810 815  
 Ser Ile Thr Asp Pro Thr Asp Pro Val Asp Tyr Tyr Pro Leu Leu Asp  
 820 825 830  
 Asp Phe Pro Thr Ser Val Pro Asp Leu Ser Thr Pro Met Leu Pro Pro  
 835 840 845  
 Val Gly Val Gln Ala Val Ala Leu Thr His Asp Ala Val Arg Val Ser  
 850 855 860  
 Trp Ala Asp Asn Ser Val Pro Lys Asn Gln Lys Thr Ser Glu Val Arg

865	870	875	880
Leu Tyr Thr Val Arg Trp Arg Thr Ser Phe Ser Ala Ser Ala Lys Tyr			
885		890	895
Lys Ser Glu Asp Thr Thr Ser Leu Ser Tyr Thr Ala Thr Gly Leu Lys			
900		905	910
Pro Asn Thr Met Tyr Glu Phe Ser Val Met Val Thr Lys Asn Arg Arg			
915		920	925
Ser Ser Thr Trp Ser Met Thr Ala His Ala Thr Thr Tyr Glu Ala Ala			
930		935	940
Pro Thr Ser Ala Pro Lys Asp Phe Thr Val Ile Thr Arg Glu Gly Lys			
945		950	955
Pro Arg Ala Val Ile Val Ser Trp Gln Pro Pro Leu Glu Ala Asn Gly			
	965	970	975
Lys Ile Thr Ala Tyr Ile Leu Phe Tyr Thr Leu Asp Lys Asn Ile Pro			
	980	985	990
Ile Asp Asp Trp Ile Met Glu Thr Ile Ser Gly Asp Arg Leu Thr His			
	995	1000	1005
Gln Ile Met Asp Leu Asn Leu Asp Thr Met Tyr Tyr Phe Arg Ile Gln			
1010		1015	1020
Ala Arg Asn Ser Lys Gly Val Gly Pro Leu Ser Asp Pro Ile Leu Phe			
1025		1030	1035
Arg Thr Leu Lys Val Glu His Pro Asp Lys Met Ala Asn Asp Gln Gly			
	1045	1050	1055
Arg His Gly Asp Gly Gly Tyr Trp Pro Val Asp Thr Asn Leu Ile Asp			
	1060	1065	1070
Arg Ser Thr Leu Asn Glu Pro Pro Ile Gly Gln Met His Pro Pro His			
1075		1080	1085
Gly Ser Val Thr Pro Gln Lys Asn Ser Asn Leu Leu Val Ile Ile Val			
1090		1095	1100
Val Thr Val Gly Val Ile Thr Val Leu Val Val Val Ile Val Ala Val			
1105		1110	1115
Ile Cys Thr Arg Arg Ser Ser Ala Gln Gln Arg Lys Lys Arg Ala Thr			
	1125	1130	1135
His Ser Ala Gly Lys Arg Lys Gly Ser Gln Lys Asp Leu Arg Pro Pro			
1140		1145	1150
Asp Leu Trp Ile His His Glu Glu Met Glu Met Lys Asn Ile Glu Lys			
1155		1160	1165
Pro Ser Gly Thr Asp Pro Ala Gly Arg Asp Ser Pro Ile Gln Ser Cys			
1170		1175	1180
Gln Asp Leu Thr Pro Val Ser His Ser Gln Ser Glu Thr Gln Leu Gly			
1185		1190	1195
			1200

Ser Lys Ser Thr Ser His Ser Gly Gln Asp Thr Glu Glu Ala Gly Ser  
1205 1210 1215

Ser Met Ser Thr Leu Glu Arg Ser Leu Ala Ala Arg Arg Ala Pro Arg  
1220 1225 1230

Ala Lys Leu Met Ile Pro Met Asp Ala Gln Ser Asn Asn Pro Ala Val  
1235 1240 1245

Val Ser Ala Ile Pro Val Pro Thr Leu Glu Ser Ala Gln Tyr Pro Gly  
1250 1255 1260

Ile Leu Pro Ser Pro Thr Cys Gly Tyr Pro His Pro Gln Phe Thr Leu  
1265 1270 1275 1280

Arg Pro Val Pro Phe Pro Thr Leu Ser Val Asp Arg Gly Phe Gly Ala  
1285 1290 1295

Gly Arg Ser Gln Ser Val Ser Glu Gly Pro Thr Thr Gln Gln Pro Pro  
1300 1305 1310

Met Leu Pro Pro Ser Gln Pro Glu His Ser Ser Ser Glu Glu Ala Pro  
1315 1320 1325

Ser Arg Thr Ile Pro Thr Ala Cys Val Arg Pro Thr His Pro Leu Arg  
1330 1335 1340

Ser Phe Ala Asn Pro Leu Leu Pro Pro Pro Met Ser Ala Ile Glu Pro  
1345 1350 1355 1360

Lys Val Pro Tyr Thr Pro Leu Leu Ser Gln Pro Gly Pro Thr Leu Pro  
1365 1370 1375

Lys Thr His Val Lys Thr Ala Ser Leu Gly Leu Ala Gly Lys Ala Arg  
1380 1385 1390

Ser Pro Leu Leu Pro Val Ser Val Pro Thr Ala Pro Glu Val Ser Glu  
1395 1400 1405

Glu Ser His Lys Pro Thr Glu Asp Ser Ala Asn Val Ser Ala Ser Leu  
1410 1415 1420

Lys Phe Met Leu His Gln Gly Thr Asp  
1425 1430

<210> 41

<211> 865

<212> PRT

<213> Homo sapiens

<400> 41

Met Pro Gly Lys Arg Gly Leu Gly Trp Trp Trp Ala Arg Leu Pro Leu  
1 5 10 15

Cys Leu Leu Leu Ser Leu Tyr Gly Pro Trp Met Pro Ser Ser Leu Gly  
20 25 30

Lys Pro Lys Gly His Pro His Met Asn Ser Ile Arg Ile Asp Gly Asp  
35 40 45

Ile Thr Leu Gly Gly Leu Phe Pro Val His Gly Arg Gly Ser Glu Gly  
 50 55 60  
 Lys Pro Cys Gly Glu Leu Lys Lys Glu Lys Gly Ile His Arg Leu Glu  
 65 70 75 80  
 Ala Met Leu Phe Ala Leu Asp Arg Ile Asn Asn Asp Pro Asp Leu Leu  
 85 90 95  
 Pro Asn Ile Thr Leu Gly Ala Arg Ile Leu Asp Thr Cys Ser Arg Asp  
 100 105 110  
 Thr His Ala Leu Glu Gln Ser Leu Thr Phe Val Gln Ala Leu Ile Glu  
 115 120 125  
 Lys Asp Gly Thr Glu Val Arg Cys Gly Ser Gly Gly Pro Pro Ile Ile  
 130 135 140  
 Thr Lys Pro Glu Arg Val Val Gly Val Ile Gly Ala Ser Gly Ser Ser  
 145 150 155 160  
 Val Ser Ile Met Val Ala Asn Ile Leu Arg Leu Phe Lys Ile Pro Gln  
 165 170 175  
 Ile Ser Tyr Ala Ser Thr Ala Pro Asp Leu Ser Asp Asn Ser Arg Tyr  
 180 185 190  
 Asp Phe Phe Ser Arg Val Val Pro Ser Asp Thr Tyr Gln Ala Gln Ala  
 195 200 205  
 Met Val Asp Ile Val Arg Ala Leu Lys Trp Asn Tyr Val Ser Thr Val  
 210 215 220  
 Ala Ser Glu Gly Ser Tyr Gly Glu Ser Gly Val Glu Ala Phe Ile Gln  
 225 230 235 240  
 Lys Ser Arg Glu Asp Gly Gly Val Cys Ile Ala Gln Ser Val Lys Ile  
 245 250 255  
 Pro Arg Glu Pro Lys Ala Gly Glu Phe Asp Lys Ile Ile Arg Arg Leu  
 260 265 270  
 Leu Glu Thr Ser Asn Ala Arg Ala Val Ile Ile Phe Ala Asn Glu Asp  
 275 280 285  
 Asp Ile Arg Arg Val Leu Glu Ala Ala Arg Arg Ala Asn Gln Thr Gly  
 290 295 300  
 His Phe Phe Trp Met Gly Ser Asp Ser Trp Gly Ser Lys Ile Ala Pro  
 305 310 315 320  
 Val Leu His Leu Glu Glu Val Ala Glu Gly Ala Val Thr Ile Leu Pro  
 325 330 335  
 Lys Arg Met Ser Val Arg Asp Arg Glu Arg Ile Gly Gln Asp Ser Ala  
 340 345 350  
 Tyr Glu Gln Glu Gly Lys Val Gln Phe Val Ile Asp Ala Val Tyr Ala  
 355 360 365

Met Gly His Ala Leu His Ala Met His Arg Asp Leu Cys Pro Gly Arg  
 370 375 380  
 Val Gly Leu Cys Pro Arg Met Asp Pro Val Asp Gly Thr Gln Leu Leu  
 385 390 395 400  
 Lys Tyr Ile Arg Asn Val Asn Phe Ser Gly Ile Ala Gly Asn Pro Val  
 405 410 415  
 Thr Phe Asn Glu Asn Gly Asp Ala Pro Gly Arg Tyr Asp Ile Tyr Gln  
 420 425 430  
 Tyr Gln Leu Arg Asn Asp Ser Ala Glu Tyr Lys Val Ile Gly Ser Trp  
 435 440 445  
 Thr Asp His Leu His Leu Arg Ile Glu Arg Met His Trp Pro Gly Ser  
 450 455 460  
 Gly Gln Gln Leu Pro Arg Ser Ile Cys Ser Leu Pro Cys Gln Pro Gly  
 465 470 475 480  
 Glu Arg Lys Lys Thr Val Lys Gly Met Pro Cys Cys Trp His Cys Glu  
 485 490 495  
 Pro Cys Thr Gly Tyr Gln Tyr Gln Val Asp Arg Tyr Thr Cys Lys Thr  
 500 505 510  
 Cys Pro Tyr Asp Met Arg Pro Thr Glu Asn Arg Thr Gly Cys Arg Pro  
 515 520 525  
 Ile Pro Ile Ile Lys Leu Glu Trp Gly Ser Pro Trp Ala Val Leu Pro  
 530 535 540  
 Leu Phe Leu Ala Val Val Gly Ile Ala Ala Thr Leu Phe Val Val Ile  
 545 550 555 560  
 Thr Phe Val Arg Tyr Asn Asp Thr Pro Ile Val Lys Ala Ser Gly Arg  
 565 570 575  
 Glu Leu Ser Tyr Val Leu Leu Ala Gly Ile Phe Leu Cys Tyr Ala Thr  
 580 585 590  
 Thr Phe Leu Met Ile Ala Glu Pro Asp Leu Gly Thr Cys Ser Leu Arg  
 595 600 605  
 Arg Ile Phe Leu Gly Leu Gly Met Ser Ile Ser Tyr Ala Ala Leu Leu  
 610 615 620  
 Thr Lys Thr Asn Arg Ile Tyr Arg Ile Phe Glu Gln Gly Lys Arg Ser  
 625 630 635 640  
 Val Ser Ala Pro Arg Phe Ile Ser Pro Ala Ser Gln Leu Ala Ile Thr  
 645 650 655  
 Phe Ser Leu Ile Ser Leu Gln Leu Leu Gly Ile Cys Val Trp Phe Val  
 660 665 670  
 Val Asp Pro Ser His Ser Val Val Asp Phe Gln Asp Gln Arg Thr Leu  
 675 680 685  
 Asp Pro Arg Phe Ala Arg Gly Val Leu Lys Cys Asp Ile Ser Asp Leu

690                      695                      700  
 Ser Leu Ile Cys Leu Leu Gly Tyr Ser Met Leu Leu Met Val Thr Cys  
 705                      710                      715                      720  
 Thr Val Tyr Ala Ile Lys Thr Arg Gly Val Pro Glu Thr Phe Asn Glu  
                     725                      730                      735  
 Ala Lys Pro Ile Gly Phe Thr Met Tyr Thr Thr Cys Ile Val Trp Leu  
                     740                      745                      750  
 Ala Phe Ile Pro Ile Phe Phe Gly Thr Ser Gln Ser Ala Asp Lys Leu  
                     755                      760                      765  
 Tyr Ile Gln Thr Thr Thr Leu Thr Val Ser Val Ser Leu Ser Ala Ser  
                     770                      775                      780  
 Val Ser Leu Gly Met Leu Tyr Met Pro Lys Val Tyr Ile Ile Leu Phe  
                     785                      790                      795                      800  
 His Pro Glu Gln Asn Val Pro Lys Arg Lys Arg Ser Leu Lys Ala Val  
                     805                      810                      815  
 Val Thr Ala Ala Thr Met Ser Asn Lys Phe Thr Gln Lys Gly Asn Phe  
                     820                      825                      830  
 Arg Pro Asn Gly Glu Ala Lys Ser Glu Leu Cys Glu Asn Leu Glu Ala  
                     835                      840                      845  
 Pro Ala Leu Ala Thr Lys Gln Thr Tyr Val Thr Tyr Thr Asn His Ala  
                     850                      855                      860  
 Ile  
 865  
  
 <210> 42  
 <211> 845  
 <212> PRT  
 <213> Homo sapiens  
  
 <400> 42  
 Met Glu Thr Lys Gly Tyr His Ser Leu Pro Glu Gly Leu Asp Met Glu  
   1                      5                      10                      15  
 Arg Arg Trp Gly Gln Val Ser Gln Ala Val Glu Arg Ser Ser Leu Gly  
                     20                      25                      30  
 Pro Thr Glu Arg Thr Asp Glu Asn Asn Tyr Met Glu Ile Val Asn Val  
                     35                      40                      45  
 Ser Cys Val Ser Gly Ala Ile Pro Asn Asn Ser Thr Gln Gly Ser Ser  
                     50                      55                      60  
 Lys Glu Lys Gln Glu Leu Leu Pro Cys Leu Gln Gln Asp Asn Asn Arg  
                     65                      70                      75                      80  
 Pro Gly Ile Leu Thr Ser Asp Ile Lys Thr Glu Leu Glu Ser Lys Glu  
                     85                      90                      95  
 Leu Ser Ala Thr Val Ala Glu Ser Met Gly Leu Tyr Met Asp Ser Val

100	105	110
Arg Asp Ala 115	Asp Tyr Ser Tyr Glu Gln Gln Asn Gln Gln Gly Ser Met 120	125
Ser Pro Ala 130	Lys Ile Tyr Gln Asn Val Glu Gln Leu Val Lys Phe Tyr 135	140
Lys Gly Asn Gly His Arg Pro Ser Thr Leu Ser Cys Val Asn Thr Pro 145	150	155 160
Leu Arg Ser Phe Met 165	Ser Asp Ser Gly Ser Ser Val Asn Gly Gly Val 170	175
Met Arg Ala Ile Val Lys Ser Pro Ile Met Cys His Glu Lys Ser Pro 180	185	190
Ser Val Cys Ser Pro Leu Asn Met Thr Ser Ser Val Cys Ser Pro Ala 195	200	205
Gly Ile Asn Ser Val Ser Ser Thr Thr Ala Ser Phe Gly Ser Phe Pro 210	215	220
Val His Ser Pro Ile Thr Gln Gly Thr Pro Leu Thr Cys Ser Pro Asn 225	230	235 240
Ala Glu Asn Arg Gly Ser Arg Ser His Ser Pro Ala His Ala Ser Asn 245	250	255
Val Gly Ser Pro Leu Ser Ser Pro Leu Ser Ser Met Lys Ser Ser Ile 260	265	270
Ser Ser Pro Pro Ser His Cys Ser Val Lys Ser Pro Val Ser Ser Pro 275	280	285
Asn Asn Val Thr Leu Arg Ser Ser Val Ser Ser Pro Ala Asn Ile Asn 290	295	300
Asn Ser Arg Cys Ser Val Ser Ser Pro Ser Asn Thr Asn Asn Arg Ser 305	310	315 320
Thr Leu Ser Ser Pro Ala Ala Ser Thr Val Gly Ser Ile Cys Ser Pro 325	330	335
Val Asn Asn Ala Phe Ser Tyr Thr Ala Ser Gly Thr Ser Ala Gly Ser 340	345	350
Ser Thr Leu Arg Asp Val Val Pro Ser Pro Asp Thr Gln Glu Lys Gly 355	360	365
Ala Gln Glu Val Pro Phe Pro Lys Thr Glu Glu Val Glu Ser Ala Ile 370	375	380
Ser Asn Gly Val Thr Gly Gln Leu Asn Ile Val Gln Tyr Ile Lys Pro 385	390	395 400
Glu Pro Asp Gly Ala Phe Ser Ser Ser Cys Leu Gly Gly Asn Ser Lys 405	410	415
Ile Asn Ser Asp Ser Ser Phe Ser Val Pro Ile Lys Gln Glu Ser Thr 420	425	430

Lys His Ser Cys Ser Gly Thr Ser Phe Lys Gly Asn Pro Thr Val Asn  
 435 440 445  
 Pro Phe Pro Phe Met Asp Gly Ser Tyr Phe Ser Phe Met Asp Asp Lys  
 450 455 460  
 Asp Tyr Tyr Ser Leu Ser Gly Ile Leu Gly Pro Pro Val Pro Gly Phe  
 465 470 475 480  
 Asp Gly Asn Cys Glu Gly Ser Gly Phe Pro Val Gly Ile Lys Gln Glu  
 485 490 495  
 Pro Asp Asp Gly Ser Tyr Tyr Pro Glu Ala Ser Ile Pro Ser Ser Ala  
 500 505 510  
 Ile Val Gly Val Asn Ser Gly Gly Gln Ser Phe His Tyr Arg Ile Gly  
 515 520 525  
 Ala Gln Gly Thr Ile Ser Leu Ser Arg Ser Ala Arg Asp Gln Ser Phe  
 530 535 540  
 Gln His Leu Ser Ser Phe Pro Pro Val Asn Thr Leu Val Glu Ser Trp  
 545 550 555 560  
 Lys Ser His Gly Asp Leu Ser Ser Arg Arg Ser Asp Gly Tyr Pro Val  
 565 570 575  
 Leu Glu Tyr Ile Pro Glu Asn Val Ser Ser Ser Thr Leu Arg Ser Val  
 580 585 590  
 Ser Thr Gly Ser Ser Arg Pro Ser Lys Ile Cys Leu Val Cys Gly Asp  
 595 600 605  
 Glu Ala Ser Gly Cys His Tyr Gly Val Val Thr Cys Gly Ser Cys Lys  
 610 615 620  
 Val Phe Phe Lys Arg Ala Val Glu Gly Gln His Asn Tyr Leu Cys Ala  
 625 630 635 640  
 Gly Arg Asn Asp Cys Ile Ile Asp Lys Ile Arg Arg Lys Asn Cys Pro  
 645 650 655  
 Ala Cys Arg Leu Gln Lys Cys Leu Gln Ala Gly Met Asn Leu Gly Ala  
 660 665 670  
 Arg Lys Ser Lys Lys Leu Gly Lys Leu Lys Gly Ile His Glu Glu Gln  
 675 680 685  
 Pro Gln Gln Gln Gln Pro Pro Pro Pro Pro Pro Pro Gln Ser Pro  
 690 695 700  
 Glu Glu Gly Thr Thr Tyr Ile Ala Pro Ala Lys Glu Pro Ser Val Asn  
 705 710 715 720  
 Thr Ala Leu Val Pro Gln Leu Ser Thr Ile Ser Arg Ala Leu Thr Pro  
 725 730 735  
 Ser Pro Val Met Val Leu Glu Asn Ile Glu Pro Glu Ile Val Tyr Ala  
 740 745 750

Gly Tyr Asp Ser Ser Lys Pro Asp Thr Ala Glu Asn Leu Leu Ser Thr  
 755 760 765  
 Leu Asn Arg Leu Ala Gly Lys Gln Met Ile Gln Val Val Lys Trp Ala  
 770 775 780  
 Lys Val Leu Pro Gly Phe Lys Asn Leu Pro Leu Glu Asp Gln Ile Thr  
 785 790 795 800  
 Leu Ile Gln Tyr Ser Trp Met Cys Leu Ser Ser Phe Ala Leu Ser Trp  
 805 810 815  
 Arg Ser Tyr Lys His Thr Asn Ser Gln Phe Leu Tyr Phe Ala Pro Asp  
 820 825 830  
 Leu Val Phe Asn Glu Leu Leu Ala Arg Val Arg Glu Gly  
 835 840 845

<210> 43  
 <211> 837  
 <212> PRT  
 <213> Homo sapiens

<400> 43  
 Met Glu Thr Lys Gly Tyr His Ser Leu Pro Glu Gly Leu Asp Met Glu  
 1 5 10 15  
 Arg Arg Trp Gly Gln Val Ser Gln Ala Val Glu Arg Ser Ser Leu Gly  
 20 25 30  
 Pro Thr Glu Arg Thr Asp Glu Asn Asn Tyr Met Glu Ile Val Asn Val  
 35 40 45  
 Ser Cys Val Ser Gly Ala Ile Pro Asn Asn Ser Thr Gln Gly Ser Ser  
 50 55 60  
 Lys Glu Lys Gln Glu Leu Leu Pro Cys Leu Gln Gln Asp Asn Asn Arg  
 65 70 75 80  
 Pro Gly Ile Leu Thr Ser Asp Ile Lys Thr Glu Leu Glu Ser Lys Glu  
 85 90 95  
 Leu Ser Ala Thr Val Ala Glu Ser Met Gly Leu Tyr Met Asp Ser Val  
 100 105 110  
 Arg Asp Ala Asp Tyr Ser Tyr Glu Gln Gln Asn Gln Gln Gly Ser Met  
 115 120 125  
 Ser Pro Ala Lys Ile Tyr Gln Asn Val Glu Gln Leu Val Lys Phe Tyr  
 130 135 140  
 Lys Gly Asn Gly His Arg Pro Ser Thr Leu Ser Cys Val Asn Thr Pro  
 145 150 155 160  
 Leu Arg Ser Phe Met Ser Asp Ser Gly Ser Ser Val Asn Gly Gly Val  
 165 170 175  
 Met Arg Ala Ile Val Lys Ser Pro Ile Met Cys His Glu Lys Ser Pro  
 180 185 190

Ser Val Cys Ser Pro Leu Asn Met Thr Ser Ser Val Cys Ser Pro Ala  
 195 200 205  
 Gly Ile Asn Ser Val Ser Ser Thr Thr Ala Ser Phe Gly Ser Phe Pro  
 210 215 220  
 Val His Ser Pro Ile Thr Gln Gly Thr Pro Leu Thr Cys Ser Pro Asn  
 225 230 235 240  
 Ala Glu Asn Arg Gly Ser Arg Ser His Ser Pro Ala His Ala Ser Asn  
 245 250 255  
 Val Gly Ser Pro Leu Ser Ser Pro Leu Ser Ser Met Lys Ser Ser Ile  
 260 265 270  
 Ser Ser Pro Pro Ser His Cys Ser Val Lys Ser Pro Val Ser Ser Pro  
 275 280 285  
 Asn Asn Val Thr Leu Arg Ser Ser Val Ser Ser Pro Ala Asn Ile Asn  
 290 295 300  
 Asn Ser Arg Cys Ser Val Ser Ser Pro Ser Asn Thr Asn Asn Arg Ser  
 305 310 315 320  
 Thr Leu Ser Ser Pro Ala Ala Ser Thr Val Gly Ser Ile Cys Ser Pro  
 325 330 335  
 Val Asn Asn Ala Phe Ser Tyr Thr Ala Ser Gly Thr Ser Ala Gly Ser  
 340 345 350  
 Ser Thr Leu Arg Asp Val Val Pro Ser Pro Asp Thr Gln Glu Lys Gly  
 355 360 365  
 Ala Gln Glu Val Pro Phe Pro Lys Thr Glu Glu Val Glu Ser Ala Ile  
 370 375 380  
 Ser Asn Gly Val Thr Gly Gln Leu Asn Ile Val Gln Tyr Ile Lys Pro  
 385 390 395 400  
 Glu Pro Asp Gly Ala Phe Ser Ser Ser Cys Leu Gly Gly Asn Ser Lys  
 405 410 415  
 Ile Asn Ser Asp Ser Ser Phe Ser Val Pro Ile Lys Gln Glu Ser Thr  
 420 425 430  
 Lys His Ser Cys Ser Gly Thr Ser Phe Lys Gly Asn Pro Thr Val Asn  
 435 440 445  
 Pro Phe Pro Phe Met Asp Gly Ser Tyr Phe Ser Phe Met Asp Asp Lys  
 450 455 460  
 Asp Tyr Tyr Ser Leu Ser Gly Ile Leu Gly Pro Pro Val Pro Gly Phe  
 465 470 475 480  
 Asp Gly Asn Cys Glu Gly Ser Gly Phe Pro Val Gly Ile Lys Gln Glu  
 485 490 495  
 Pro Asp Asp Gly Ser Tyr Tyr Pro Glu Ala Ser Ile Pro Ser Ser Ala  
 500 505 510  
 Ile Val Gly Val Asn Ser Gly Gly Gln Ser Phe His Tyr Arg Ile Gly

515	520	525
Ala Gln Gly Thr Ile Ser 530	Leu Ser Arg Ser 535	Ala Arg Asp Gln Ser Phe 540
Gln His Leu Ser Ser Phe 545	Pro Pro Val Asn Thr 550	Leu Val Glu Ser Trp 555
Lys Ser His Gly Asp Leu Ser Ser Arg 565	Arg Ser Asp Gly Tyr Pro Val 570	
Leu Glu Tyr Ile Pro Glu Asn Val Ser Ser Ser Thr Leu Arg Ser Val 580		590
Ser Thr Gly Ser Ser Arg Pro Ser Lys Ile Cys Leu Val Cys Gly Asp 595	600	605
Glu Ala Ser Gly Cys His Tyr Gly Val Val Thr Cys Gly Ser Cys Lys 610	615	620
Val Phe Phe Lys Arg Ala Val Glu Gly Gln His Asn Tyr Leu Cys Ala 625	630	635
Gly Arg Asn Asp Cys Ile Ile Asp Lys Ile Arg Arg Lys Asn Cys Pro 645	650	655
Ala Cys Arg Leu Gln Lys Cys Leu Gln Ala Gly Met Asn Leu Gly Ala 660	665	670
Arg Lys Ser Lys Lys Leu Gly Lys Leu Lys Gly Ile His Glu Glu Gln 675	680	685
Pro Gln Gln Gln Gln Pro Pro Pro Pro Pro Pro Pro Gln Ser Pro 690	695	700
Glu Glu Gly Thr Thr Tyr Ile Ala Pro Ala Lys Glu Pro Ser Val Asn 705	710	715
Thr Ala Leu Val Pro Gln Leu Ser Thr Ile Ser Arg Ala Leu Thr Pro 725	730	735
Ser Pro Val Met Val Leu Glu Asn Ile Glu Pro Glu Ile Val Tyr Ala 740	745	750
Gly Tyr Asp Ser Ser Lys Pro Asp Thr Ala Glu Asn Leu Leu Ser Thr 755	760	765
Leu Asn Arg Leu Ala Gly Lys Gln Met Ile Gln Val Val Lys Trp Ala 770	775	780
Lys Val Leu Pro Gly Phe Lys Asn Leu Pro Leu Glu Asp Gln Ile Thr 785	790	795
Leu Ile Gln Tyr Ser Trp Met Cys Leu Ser Ser Phe Ala Leu Ser Trp 805	810	815
Arg Ser Tyr Lys His Thr Asn Ser Gln Phe Leu Tyr Phe Ala Pro Asp 820	825	830
Leu Val Phe Asn Glu 835		

<210> 44  
 <211> 640  
 <212> PRT  
 <213> Homo sapiens

<400> 44  
 Met Gly Arg Leu Gln Leu Val Val Leu Gly Leu Thr Cys Cys Trp Ala  
 1 5 10 15  
 Val Ala Ser Ala Ala Lys Leu Gly Ala Val Tyr Thr Glu Gly Gly Phe  
 20 25 30  
 Val Glu Gly Val Asn Lys Lys Leu Gly Leu Leu Gly Asp Ser Val Asp  
 35 40 45  
 Ile Phe Lys Gly Ile Pro Phe Ala Ala Pro Thr Lys Ala Leu Glu Asn  
 50 55 60  
 Pro Gln Pro His Pro Gly Trp Gln Gly Thr Leu Lys Ala Lys Asn Phe  
 65 70 75 80  
 Lys Lys Arg Cys Leu Gln Ala Thr Ile Thr Gln Asp Ser Thr Tyr Gly  
 85 90 95  
 Asp Glu Asp Cys Leu Tyr Leu Asn Ile Trp Val Pro Gln Gly Arg Lys  
 100 105 110  
 Gln Val Ser Arg Asp Leu Pro Val Met Ile Trp Ile Tyr Gly Gly Ala  
 115 120 125  
 Phe Leu Met Gly Ser Gly His Gly Ala Asn Phe Leu Asn Asn Tyr Leu  
 130 135 140  
 Tyr Asp Gly Glu Glu Ile Ala Thr Arg Gly Asn Val Ile Val Val Thr  
 145 150 155 160  
 Phe Asn Tyr Arg Val Gly Pro Leu Gly Phe Leu Ser Thr Gly Asp Ala  
 165 170 175  
 Asn Leu Pro Gly Asn Tyr Gly Leu Arg Asp Gln His Met Ala Ile Ala  
 180 185 190  
 Trp Val Lys Arg Asn Ile Ala Ala Phe Gly Gly Asp Pro Asn Asn Ile  
 195 200 205  
 Thr Leu Phe Gly Glu Ser Ala Gly Gly Ala Ser Val Ser Leu Gln Thr  
 210 215 220  
 Leu Ser Pro Tyr Asn Lys Gly Leu Ile Arg Arg Ala Ile Ser Gln Ser  
 225 230 235 240  
 Gly Val Ala Leu Ser Pro Trp Val Ile Gln Lys Asn Pro Leu Phe Trp  
 245 250 255  
 Ala Lys Lys Val Ala Glu Lys Val Gly Cys Pro Val Gly Asp Ala Ala  
 260 265 270  
 Arg Met Ala Gln Cys Leu Lys Val Thr Asp Pro Arg Ala Leu Thr Leu  
 275 280 285

Ala Tyr Lys Val Pro Leu Ala Gly Leu Glu Tyr Pro Met Leu His Tyr  
 290 295 300  
 Val Gly Phe Val Pro Val Ile Asp Gly Asp Phe Ile Pro Ala Asp Pro  
 305 310 315 320  
 Ile Asn Leu Tyr Ala Asn Ala Ala Asp Ile Asp Tyr Ile Ala Gly Thr  
 325 330 335  
 Asn Asn Met Asp Gly His Ile Phe Ala Ser Ile Asp Met Pro Ala Ile  
 340 345 350  
 Asn Lys Gly Asn Lys Lys Val Thr Glu Glu Asp Phe Tyr Lys Leu Val  
 355 360 365  
 Ser Glu Phe Thr Ile Thr Lys Gly Leu Arg Gly Ala Lys Thr Thr Phe  
 370 375 380  
 Asp Val Tyr Thr Glu Ser Trp Ala Gln Asp Pro Ser Gln Glu Asn Lys  
 385 390 395 400  
 Lys Lys Thr Val Val Asp Phe Glu Thr Asp Val Leu Phe Leu Val Pro  
 405 410 415  
 Thr Glu Ile Ala Leu Ala Gln His Arg Ala Asn Ala Lys Ser Ala Lys  
 420 425 430  
 Thr Tyr Ala Tyr Leu Phe Ser His Pro Ser Arg Met Pro Val Tyr Pro  
 435 440 445  
 Lys Trp Val Gly Ala Asp His Ala Asp Asp Ile Gln Tyr Val Phe Gly  
 450 455 460  
 Lys Pro Phe Ala Thr Pro Thr Gly Tyr Arg Pro Gln Asp Arg Thr Val  
 465 470 475 480  
 Ser Lys Ala Met Ile Ala Tyr Trp Thr Asn Phe Ala Lys Thr Gly Asp  
 485 490 495  
 Pro Asn Met Gly Asp Ser Ala Val Pro Thr His Trp Glu Pro Tyr Thr  
 500 505 510  
 Thr Glu Asn Ser Gly Tyr Leu Glu Ile Thr Lys Lys Met Gly Ser Ser  
 515 520 525  
 Ser Met Lys Arg Ser Leu Arg Thr Asn Phe Leu Arg Tyr Trp Thr Leu  
 530 535 540  
 Thr Tyr Leu Ala Leu Pro Thr Val Thr Asp Gln Glu Ala Thr Pro Val  
 545 550 555 560  
 Pro Pro Thr Gly Asp Ser Glu Ala Thr Pro Val Pro Pro Thr Gly Asp  
 565 570 575  
 Ser Glu Thr Ala Pro Val Pro Pro Thr Gly Asp Ser Gly Ala Pro Pro  
 580 585 590  
 Val Pro Pro Thr Gly Asp Ser Gly Ala Pro Pro Val Pro Pro Thr Gly  
 595 600 605

Asp Ser Gly Ala Pro Pro Val Pro Pro Thr Gly Asp Ser Gly Ala Pro  
610 615 620

Pro Val Pro Pro Thr Gly Asp Ser Gly Ala Pro Pro Val Pro Pro Pro  
625 630 635 640

<210> 45  
<211> 201  
<212> PRT  
<213> Homo sapiens

<400> 45  
Met Arg Ala Leu Leu Ala Arg Leu Leu Leu Cys Val Leu Val Val Ser  
1 5 10 15

Asp Ser Lys Gly Ser Asn Glu Leu His Gln Val Pro Ser Asn Cys Asp  
20 25 30

Cys Leu Asn Gly Gly Thr Cys Val Ser Asn Lys Tyr Phe Ser Asn Ile  
35 40 45

His Trp Cys Asn Cys Pro Lys Lys Phe Gly Gly Gln His Cys Glu Ile  
50 55 60

Asp Lys Ser Lys Thr Cys Tyr Glu Gly Asn Gly His Phe Tyr Arg Gly  
65 70 75 80

Lys Ala Ser Thr Asp Thr Met Gly Arg Pro Cys Leu Pro Trp Asn Ser  
85 90 95

Ala Thr Val Leu Gln Gln Thr Tyr His Ala His Arg Ser Asp Ala Leu  
100 105 110

Gln Leu Gly Leu Gly Lys His Asn Tyr Cys Arg Glu Val Gly Ala Gln  
115 120 125

Gly Pro Lys Ala Leu Pro Thr Val Pro Arg Asn Leu Val Thr Ile Pro  
130 135 140

Phe Ser Gln Arg Ala Gly His Ser Thr Arg Glu Val Gln Pro Leu Val  
145 150 155 160

Glu Ser Ser Leu Arg Gly Gly Gly Arg Glu Gly Pro Leu Gly Trp Asn  
165 170 175

Asp Ile Pro Tyr Leu Ser Val Leu Pro Gly Thr Gln Thr Thr Gly Gly  
180 185 190

Asp Pro Gly Ala Met Cys Arg Trp Ala  
195 200

<210> 46  
<211> 74  
<212> PRT  
<213> Homo sapiens

&lt;400&gt; 46

Met Lys Thr Tyr Arg Ala Lys Phe Cys Gly Val Cys Thr Asp Gly Arg  
 1 5 10 15

Cys Cys Thr Pro His Arg Thr Thr Thr Leu Pro Val Glu Phe Lys Cys  
 20 25 30

Pro Asp Gly Glu Val Met Lys Lys Asn Met Met Phe Ile Lys Thr Cys  
 35 40 45

Ala Cys His Tyr Asn Cys Pro Gly Asp Asn Asp Ile Phe Glu Ser Leu  
 50 55 60

Tyr Tyr Arg Lys Met Tyr Gly Asp Met Ala  
 65 70

&lt;210&gt; 47

&lt;211&gt; 166

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 47

Met Thr Ala Ala Ser Met Gly Pro Val Arg Val Ala Phe Val Val Leu  
 1 5 10 15

Leu Ala Leu Cys Ser Arg Pro Ala Val Gly Gln Asn Cys Ser Gly Pro  
 20 25 30

Cys Arg Cys Pro Asp Glu Pro Ala Pro Arg Cys Pro Ala Gly Val Ser  
 35 40 45

Leu Val Leu Asp Gly Cys Gly Cys Cys Arg Val Cys Ala Lys Gln Leu  
 50 55 60

Gly Glu Leu Cys Thr Glu Arg Asp Pro Cys Asp Pro His Lys Gly Leu  
 65 70 75 80

Phe Cys Asp Phe Gly Ser Pro Ala Asn Arg Lys Ile Gly Val Cys Thr  
 85 90 95

Ala Lys Asp Gly Ala Pro Cys Ile Phe Gly Gly Thr Val Tyr Arg Ser  
 100 105 110

Gly Glu Ser Phe Gln Ser Ser Cys Lys Tyr Gln Cys Thr Cys Leu Asp  
 115 120 125

Gly Ala Val Gly Cys Met Pro Leu Cys Ser Met Asp Val Arg Leu Pro  
 130 135 140

Ser Pro Asp Cys Pro Phe Pro Ser Leu Pro Thr Gly Arg His Val Trp  
 145 150 155 160

Pro Arg Pro Asn Tyr Asp  
 165

&lt;210&gt; 48

&lt;211&gt; 140

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

Met Glu Asn Ser Leu Arg Cys Val Trp Val Pro Lys Leu Ala Phe Val  
1 5 10 15

Glu Gln Pro Glu Leu Ser Ser Ala Pro Gly Leu His Gln Asp Leu His

130

135

140

Cys Trp Leu  
145

<210> 50  
<211> 82  
<212> PRT  
<213> Homo sapiens

<400> 50  
Met Ser Val Lys Glu Thr Leu Pro Leu Ile His Gln Gln Met Tyr Lys  
1 5 10 15  
Gly Phe Gln Ala Leu Gly Asp Ala Ala Asp Ile Arg Phe Val Tyr Thr  
20 25 30  
Pro Ala Met Glu Ser Val Cys Gly Tyr Phe His Arg Ser His Asn Arg  
35 40 45  
Ser Glu Glu Phe Leu Ile Ala Gly Glu Ala Pro Ser Pro Arg Pro Val  
50 55 60  
Pro His Gln Pro Val Pro Gly Ala Arg Pro Ser Asn His Glu Gly Ala  
65 70 75 80  
Arg Leu

<210> 51  
<211> 115  
<212> PRT  
<213> Homo sapiens

<400> 51  
Met Ala Pro Phe Glu Pro Leu Ala Ser Gly Ile Leu Leu Leu Leu Trp  
1 5 10 15  
Leu Ile Ala Pro Ser Arg Ala Cys Thr Cys Val Pro Pro His Pro Gln  
20 25 30  
Thr Ala Phe Cys Asn Ser Asp Leu Val Ile Arg Ala Lys Phe Val Gly  
35 40 45  
Thr Pro Glu Val Asn Gln Thr Thr Leu Tyr Gln Arg Tyr Glu Ile Lys  
50 55 60  
Met Thr Lys Met Tyr Lys Gly Phe Gln Ala Leu Gly Asp Ala Ala Asp  
65 70 75 80  
Ile Arg Phe Val Tyr Thr Pro Ala Met Glu Ser Val Cys Gly Tyr Phe  
85 90 95  
His Arg Met Asp Ser Cys Thr Ser Leu Pro Ala Val Ser Trp Leu Pro  
100 105 110  
Gly Thr Ala  
115

any other data may be found in the original document

<210> 52  
 <211> 143  
 <212> PRT  
 <213> Homo sapiens

<400> 52

Met Thr Lys Met Tyr Lys Gly Phe Gln Ala Leu Gly Asp Ala Ala Asp  
 1 5 10 15

Ile Arg Phe Val Tyr Thr Pro Ala Met Glu Ser Val Cys Gly Tyr Phe  
 20 25 30

His Arg Ser His Asn Arg Ser Glu Phe Leu Ile Ala Gly Lys Leu  
 35 40 45

Gln Asp Gly Leu Leu His Ile Thr Thr Cys Ser Phe Val Ala Pro Trp  
 50 55 60

Asn Ser Leu Ser Leu Ala Gln Arg Arg Gly Phe Thr Lys Thr Tyr Thr  
 65 70 75 80

Val Gly Cys Glu Glu Cys Thr Val Phe Pro Cys Leu Ser Ile Pro Cys  
 85 90 95

Lys Leu Gln Ser Gly Thr His Cys Leu Trp Thr Asp Gln Leu Leu Gln  
 100 105 110

Gly Ser Glu Lys Gly Phe Gln Ser Arg His Leu Ala Cys Leu Pro Arg  
 115 120 125

Glu Pro Gly Leu Cys Thr Trp Gln Ser Leu Arg Ser Gln Ile Ala  
 130 135 140